DOCUMENT RESUME

ED 366 845 CE 065 866

AUTHOR	Riley, Jim
TITLE	Farm Business Management Analysis. Unit I: Establishing a Farm Accounting System. Revised. Volume 25, Number 3.
INSTITUTION	Missouri Univ., Columbia. Instructional Materials Lab.
SPONS AGENCY	Missouri State Dept. of Elementary and Secondary Education, Jefferson City. Div. of Vocational and Adult Education.
PUB DATE	Apr 93
NOTE	219p.; For unit II, see CE 065 867.
AVAILABLE FROM	Instructional Materials Laboratory, University of Missouri, 2316 Industrial Drive, Columbia, MO 65202 (order no. 10-8101-I).
PUB TYPE	Guides - Classroom Use - Teaching Guides (For Teacher) (052)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	*Accounting; Adult Farmer Education; Agricultural Education; Bookkeeping; Course Content; *Farm Accounts; Farmers; *Farm Management; Individual Instruction; Learning Activities; Lesson Plans; Postsecondary Education; *Recordkeeping; Records Management; Teaching Methods; Units of Study; Young Farmer Education
IDENTIFIERS	Missouri

ABSTRACT

The lessons in this unit are designed primarily for Missouri vocational agriculture instructors participating in the Farm Business Management Analysis program. Each of the 10 lessons in the unit is a self-contained instructional package and includes material for monthly classroom sessions for young and adult farmers and for individualized instructional activity. The lessons include specific suggestions for teacher preparation. The sample entries throughout the unit are taken from the sample entry material available from the Instructional Materials Laboratory for the Missouri Farm Business Record Book. Lesson components include a review, objective, motivation, key points, introduction of information, discussion, conclusions, announcements, social time, instruction, and lesson materials such as transparencies and handouts and quizzes. Topics covered in the 10 lessons are the following: (1) orientation to the Farm Business Management Analysis program; (2) introduction to keeping records; (3) recording receipts and expenditures; (4) planning the year's cash flow; (5) developing inventories of machinery; (6) developing inventories of livestock and of crops and supplies; (7) developing an investment record for real estate; (8) keeping enterprise records; (9) completing farm support records; and (10) using the concept of time value in planning. Also included are the Administrative Guidelines for Farm Business Management Analysis, which describe minimum standards and how to establish a program. (KC)

ED 366 845

10-8101-I
INSTRUCTOR

UNIT I

FARM BUSINESS MANAGEMENT ANALYSIS

ESTABLISHING A FARM ACCOUNTING SYSTEM

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Revised 1993

"PERMISSION TO REPRODUCE THIS MATERIAL IN OTHER THAN PAPER COPY HAS BEEN GRANTED BY

H. Schlichting

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)"

In cooperation with
Agricultural Education
Department of Practical Arts
and Vocational-Technical Education
College of Education and College of Agriculture
University of Missouri-Columbia

In cooperation with
Agricultural Education Section
Division of Vocational and Adult Education
Department of
Elementary and Secondary Education
Jefferson City, Missouri

BEST COPY AVAILABLE

The activity which is the subject of this report was supported in whole or in part by funds from the Department of Elementary and Secondary Education, Division of Vocational and Adult Education. However, the opinions expressed herein do not necessarily reflect the position or policies of the Missouri Department of Elementary and Secondary Education or the Division of Vocational and Adult Education, and no official endorsement should be inferred.

FARM BUSINESS MANAGEMENT ANALYSIS

UNIT I:

ESTABLISHING A FARM ACCOUNTING SYSTEM

Original by:

Robert Denker
Bob R. Stewart
Norman Rohrbach
Carla Kirts

Revision by:

Jim Riley

Available from the
Instructional Materials Laboratory
University of Missouri-Columbia
10 London Hall
Columbia, Missouri 65211
314-882-2883

Volume 25
Number 3

Catalog Number 10-8101-I
Revised April 1993

ACKNOWLEDGEMENTS

Many individuals contributed to the development of the original Farm Business Management Analysis (FBMA) program. The advisory committee for the FBMA project that provided most of the original input included:

Myron Bennett
Don Brandt
John Bryant
Larry Case
Don Claycomb
O. D. Cope
Kay Dameron
Robert Denker
James Deveny
Doug Funk
Glen Godsey
Jim Golding
Jim Grozinger
Raymond Hagan
G. W. Hamby
Hugh Hardie
John Harvey
Robert Hayward
Terry Heiman
Norlin Hein
Carla Kirts
Jim Kliebenstein
Don LaRue
Richard Linhardt
Cliff McBride
Wally McGinnis
Charlotte Niemeier
Greg Nolting
Joe Pace
Dale Ratcliff
Jim Riley
Larry Riley
Norman Rohrbach
Larry Rost
Bob R. Stewart
Curtis W. Weston
Donna Wickstrom
Roger Williams

Recognition is also given to the University of Minnesota for their materials, used as major references for the original FBMA project.

The 1993 revision committee that provided suggestions for updating the original guide included:

Bob Broz
Ray Hasenjaeger
Lee Longan
Norman Rohrbach
John Sponaugle

Jim Riley, project coordinator, revised and updated the guide. Sandy Kaiser provided word processing and proofreading support.

FOREWORD

The lessons in this unit, Unit I--Establishing a Farm Accounting System, are designed primarily for Missouri vocational agriculture instructors participating in the Farm Business Management Analysis program. (More information about the FBMA program can be found in the Administrative Guidelines packaged with this unit.) Each lesson is a self-contained instructional package and includes material for the monthly classroom session and the monthly individualized instructional activity. The lessons are written using the Missouri format for adult instruction as outlined in the Administrative Guidelines for Farm Business Management Analysis. Specific suggestions for using the material in preparing to teach the lessons are also included in this publication. The sample entries throughout this unit are taken from the sample entry material available from IML (Instructional Materials Laboratory) for the Missouri Farm Business Record Book.

A key activity to successful local programs is the monthly individualized instruction periods. These must include checking with the enrollees to be certain that records are being kept up-to-date and that the correct procedure is being used. Effective farm management decisions must be based on current, accurate data and analysis.

The lessons are designed to be used with a group of enrollees primarily composed of local young and adult farmers, or they can be utilized for individual instruction. Monthly sessions should start in October and be conducted with subsequent lessons on a monthly schedule. Adaptations may need to be made in some communities to permit more than one lesson per month and none during the spring crop season. In essence, the curriculum is designed for flexibility, affording each instructor the latitude to adjust the curriculum to insure its most effective implementation.

Revised:

Jim Riley
Agriculture Education
University of Missouri-Columbia
Columbia, Missouri

Terry W. Heiman, Director
Agricultural Education
Department of Elementary and
Secondary Education
Jefferson City, Missouri

TABLE OF CONTENTS

		Page
Acknowledgements		iii
Forward		iv
To The Instructor--Suggestions for Use		vii
Lesson 1:	Orientation to the Farm Business Management Analysis Program	1.1
Lesson 2:	Introduction to Keeping Records	2.1
Lesson 3:	Recording Receipts and Expenditures	3.1
Lesson 4:	Planning the Year's Cash Flow	4.1
Lesson 5:	Developing Inventories of Machinery	5.1
Lesson 6:	Developing Inventories of Livestock and of Crops and Supplies	6.1
Lesson 7:	Developing an Investment Record for Real Estate	7.1
Lesson 8:	Keeping Enterprise Records	8.1
Lesson 9:	Completing Farm Support Records	9.1
Lesson 10:	Using the Concept of Time Value in Planning	10.1

TO THE INSTRUCTOR--SUGGESTIONS FOR USE

Unit I--Establishing a Farm Accounting System is designed as a curriculum guide for Farm Business Management Analysis (FBMA) instructors to use in helping Missouri young and adult farmers develop a record keeping system. The unit is composed of ten lessons that include topics such as receipts and expenditures; cash flow; depreciation for machinery, equipment and livestock; inventories; investment records for real estate; and time value applied to planning.

The outline of each lesson is based on the Missouri format for adult instructional materials, which is very similar to procedures applied to using the problem solving approach. The major components of each lesson include the review, objective, motivation, key points (called study questions when using a structured problem solving approach), introduction of information (facts, examples, etc., needed to address each key point), discussion, conclusions, announcements, social, individual instruction, and materials needed to teach the lesson (transparencies, handouts, etc.).

Because a curriculum cannot be "all things to all people," instructors are encouraged to use this unit as a guide to teaching FBMA. For example, transparencies and handouts are suggested for use, but could be replaced with self-designed materials that the instructor feels are more appropriate in a specific community. Furthermore, while one instructor uses every transparency and handout provided with the lesson, another may only use a select few because the information could be presented in a more appropriate manner.

All lessons, transparencies and handouts relate to the sample entries and reports generated from a case farm study. References throughout the curriculum to the "Sample Entries for the Missouri Farm Business Record Book (Answer Key)" refer to the enclosed packet of that name. References to the "FBMA sample analysis forms" refer to the enclosed pink, blue and green forms.

Transparencies and handouts are numbered separately for each unit and are labeled using the abbreviations TM and HO, respectively. For example, the first lesson contains TM-1.1 through TM-1.12 and HO-1.1 through HO-1.4. In several instances, for example lessons 3 and 4, transparencies and handouts from a preceding lesson are suggested for use with a subsequent lesson. Instead of duplicating the materials in each lesson, a reference to the previous lesson is made in the subsequent lesson. Furthermore, several transparencies and handouts are combined on one sheet and are consequently labeled with both identification codes (TM-10.1 and HO-10.6, Lesson 10). Handouts should be duplicated by the instructor, while transparencies can be self-produced or ordered from the Instructional Materials Laboratory at the University of Missouri-Columbia.

Quizzes have been included at the end of most of these lessons. These are provided as additional materials that can be used to motivate the enrollees; they are not intended to be used as measures of achievement at the end of each lesson.

Before teaching a lesson, the instructor should thoroughly review the lesson and accompanying materials. Instructors piloting these lessons generally suggest two methods for preparing to teach the lesson: 1) read the lesson several times and highlight (circle or color code) specific parts to facilitate instruction; and 2) outline a lesson plan, based on the FBMA lesson, that can be taken into class and used without the help of the original FBMA lesson. These procedures help assure that the instructor is thoroughly acquainted with the information and materials before going into class and is not relying solely on the printed curriculum.

Each enrollee, or pair of enrollees (if spouses, business partners, etc., are enrolled simultaneously), needs a Missouri Farm Business Record Book. In addition, the instructor may want enrollees to maintain a notebook in which notes, handouts, and examples can be placed. If this is the case, the instructor will probably want to punch all handouts for convenient insertion in these personal notebooks. Besides being a home or office reference for enrollees to use when making actual entries, the notebook could provide a convenient, useful reference for the instructor and enrollees to use during individual visits (suggested with each monthly lesson).

FARM BUSINESS MANAGEMENT ANALYSIS

Unit I: Establishing a Farm Accounting System

Lesson 1: Orientation to the Farm Business Management Analysis Program

A. Review

Because this is the first lesson for the group, a review is impossible. Therefore, you may want to organize a "get acquainted mixer" for the group. As a suggestion, write a paragraph that describes each couple or individual enrolled, being careful not to mention names, and prepare them as a handout. As participants arrive for class, give them copies and have them mingle and identify the people who match the descriptions. You may want to include yourself on the description list.

B. Objective

To understand the FBMA program and to develop realistic family and farm business goals.

C. Motivation

Start the discussion by pointing out that all of us have goals. Some of our goals relate to our farm business, while other goals relate more to the family. Some goals are more important than others, or, put another way, there are $10 goals and $10,000 goals. We should keep in mind the overall importance of our goals and treat each of them accordingly.

Often times we set short-range goals to achieve major goals in the future. Because of outside factors, we need to stay flexible in order to achieve our major goals. Often times, because of changing factors, we change our goals!

Without a set of well-planned goals, a farm family may not know where it is headed. A good set of records and the FBMA program can be used like a map to indicate where we are and to assist us in decision making so that goals can be obtained. Remember, no road will get you there if you don't know where you are going.

Enrollees should be allowed to react to the presented concept of goals. Identifying goals may be new to many enrollees; however, few can argue that they don't have any goals.

D. Key Points

Key points that will be accomplished are as follows:

1. *What is the FBMA program and how may it benefit me?*

2. *What are my farm and family goals?*

E. Introduction of Information

Start the introduction of information by pointing out that the purpose of this first session is to get acquainted with the program and to begin to make some plans. First, discuss the FBMA program and make some plans concerning how to use it in the community.

1. ***What is the FBMA program and how may it benefit me?***

   a. Use the flow chart on "Responsibilities of Teachers for Adult/Young Farmer Education" found in the Administrative Guidelines for Farm Business Management Analysis. Make the following points to start explaining the FBMA program. (Be sure to make adaptations for local situations as needed.)

      (1) The total agriculture education program includes both secondary and adult work. Adult work includes other classes and groups such as . . . . (Explain other adult work in your school and describe how enrollees might fit into some of those programs and/or classes.)

      (2) The FBMA program is based on a three-year series of classes: Establishing a Farm Accounting System; Analyzing the Farm Business; and Adjusting the Farm Business to Increase Profit. Basically, the idea is that we have to have a solid base of information on which to make decisions. So this first year, we will spend some time at each meeting on entries in record books. Some of you have a lot of experience in this and can help others. At the end of the year, we will close out the books and have them summarized and analyzed by a computer system.

      (3) The FBMA program also includes individual instruction and visits to farms of enrollees to assist with getting started this first year on records. Basically, the individual meetings each month will correspond to the meeting topic. Also, all of you are eligible and

encouraged to join the Young Farmer and Young Farm Wives Associations. (Some local activities could be mentioned).

b. Refer to the FBMA sample analysis forms to give enrollees an idea of the type of print-out that will be available through FBMA. This gives them an idea of the information provided by the system. Refer to the yearly FBMA Summary of Records (available annually from the state FBMA office) to illustrate the use of such information. A copy of the Sample Entries for the Missouri Farm Business Record Book (Answer Key) should be shown at this time to allow the enrollee to see how the completed forms will look.

c. Show TM-1.1 to illustrate the lessons that will be used in Year 1. At this point, the group may want to decide the meeting night, etc., or individuals may want to schedule individual visits.

d. Show TM-1.2 to illustrate the results received by a similar program in another state. It might be necessary to point out that a charge for the enrollees' time in attending class, keeping records, fees, etc., was made to compute the cost of the program to the enrollees and that returns were the amount of increase in farm earnings. Note that the returns drop around the fourth and fifth year. This is because the "easy" changes have been made in the business by this time, and because there are certain "start up" costs associated with major revisions in the business that usually start about the fourth or fifth year.

e. Show TM-1.3 and TM-1.4 and discuss briefly the highlights, goals, and benefits of the FBMA program. This might serve as a review of the first key point.

2. ***What are my farm and family goals?***

a. Show TM-1.5. This illustrates some trends taking place. These are figures from the FBMA averages. The following points can be made:

(1) The range from the high one-third to the bottom one-third points out the problem with working with averages. Farmers with good records will know if they are in the high range or the low range.

(2) Many goals of the farm family will be effected by where they are on the range.

(3) The word "business" refers to the total farm business and includes land and other assets the operator may rent or lease. Also, it includes borrowed capital.

(4) The total operator's capital in 1992 is 121 percent of 1990. The value of land in 1992 accounts for 58 percent of the total operator's capital.

(5) These figures point out the fact that capital investment is high in farming, and a large part of that is in land. Many of the class members will have the owning of land as a major goal.

(6) The net farm income for the operator will give some indication of the available capital each year to meet that goal.

(7) Not all goals are directly related to net income. You may want to point this out at this time.

b. Show TM-1.6 to illustrate some points in setting goals. Try to give examples of each of these and relate to the group. Emphasize that when developing goals, one must consider <u>how</u> they can be achieved. Use TM-1.7 to illustrate the need for everyone in the family to have similar goals. Often, to become established in farming and to reach long-term goals, it is necessary to forego short-term goals and reinvest the money in the business. On the other hand, the family cannot be expected to "live poor and die rich" as many farmers in the past have done. You, as an instructor, need to know the families' goals in order to provide the input to help them reach the goals.

c. Show TM-1.8 to point out that success is reaching one's goals. There are different goals for different people. However, even if two individuals have the same or similar goals, a difference still exists in that there are many different ways to achieve a goal. For example, two people may have the goal of reaching Washington, D.C., from here, but may differ substantially in the route taken to get there.

d. Distribute HO-1.1. Divide the couples. Place the men on one side of the room and the women on the other side. Have them

rate goals individually first. Next, have the couples regroup and have each couple develop a family/business rating.

e. Show TM-1.9 and TM-1.10 to provide an example of goals for one family. Then, distribute HO-1.2 and HO-1.3 and let families discuss and start to develop some goals.

f. Announce that you would like to have a copy of HO-1.2 and HO-1.3 for your files. Another copy of HO-1.2 and HO-1.3 should be distributed so that families will have a fresh copy to formulate their goals at home.

g. Use TM-1.11 and TM-1.12 and ask each family to share one goal and write it on the transparency. The purpose is to provide examples of how it is done and to get the group to think about goals. Do not expect them to finish this exercise in class. Ask them to work on this prior to your next individual visit.

F. Discussion

Items such as meeting night and time to begin, how to handle social activities, collection of fees, and time of day for individual instruction need to be discussed.

Sufficient time should be allotted so that enrollees have all questions concerning the program answered.

Announce that your individual sessions will be used for getting acquainted and learning about their businesses.

G. Conclusions

Conclusions that may be reached include:

1. Records are necessary to tell where we are and where we are going.

2. The FBMA program should assist in meeting reasonable goals.

3. Goals need to be set. That is, they need to be thoroughly discussed and written out on paper. We agreed that everyone has goals, but that the more specifically and realistically they are stated, the nearer we come to zeroing in on our target.

4.

Announcements

Next meeting, we will be working on keeping records. I will contact you very soon concerning my individual meeting with you and your family.

Social

Individual Instruction

When working with enrollees following this lesson, you may want to discuss their short- and long-range goals. You may want to give input in the short-range goals to assist them in meeting their long-range goals. Impress upon them that the better you understand their goals, the better prepared you will be to serve their needs.

Use this time to have enrollees complete HO-1.4 for your records.

Materials Needed

Instructor

Missouri Farm Business Record Book
Sample Entries for the Missouri Farm Business Record Book (Answer Key)
FBMA sample analysis forms
FBMA Summary of Records (current year's copy)

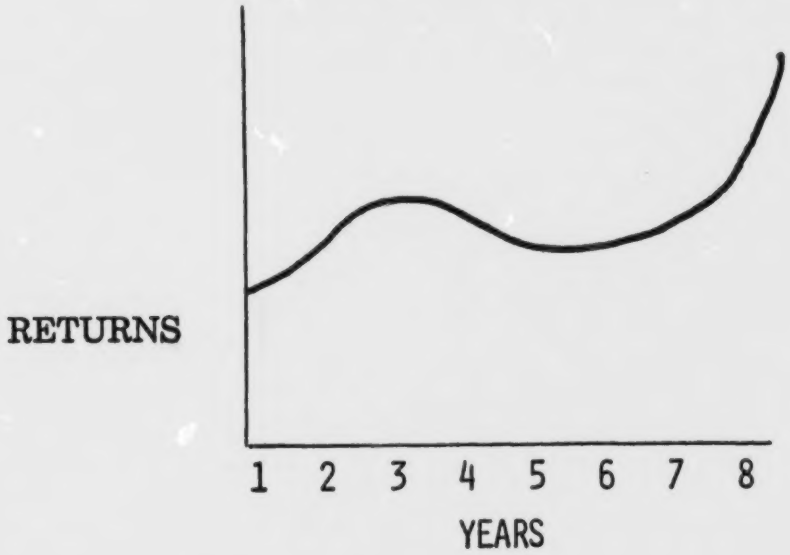
TM-1.1	FBMA Program
TM-1.2	Results of FBMA Programs
TM-1.3	Goals of FBMA
TM-1.4	Benefits of FBMA
TM-1.5	Situation of Farms in FBMA (1990-1992)
TM-1.6	Points in Setting Goals
TM-1.7	Mutual Objectives
TM-1.8	Success
TM-1.9	Family Goals
TM-1.10	Farm Business Goals
TM-1.11	Goal Setting--Farm Business Goals
TM-1.12	Goal Setting--Family Goals

Student

HO-1.1	Rate Your Goals
HO-1.2/HO-1.3	Goal Setting (distribute in duplicate); these are combined with TM-1.11 and TM-1.12, respectively.
HO-1.4	Enrollment Form

FARM BUSINESS MANAGEMENT ANALYSIS PROGRAM	
UNIT I ESTABLISHING A FARM ACCOUNTING SYSTEM	DATE
Lesson 1 Orientation to the Farm Business Management Analysis Program	
Lesson 2 Introduction to Keeping Records	
Lesson 3 Recording Receipts and Expenditures	
Lesson 4 Planning the Year's Cash Flow	
Lesson 5 Developing Inventories of Machinery	
Lesson 6 Developing Inventories of Livestock and of Crops and Supplies	
Lesson 7 Developing an Investment Record for Real Estate	
Lesson 8 Keeping Enterprise Records	
Lesson 9 Completing Farm Support Records	
Lesson 10 Using the Concept of Time Value in Planning	
UNIT II ANALYZING THE FARM BUSINESS	
UNIT III ADJUSTING THE FARM BUSINESS TO INCREASE PROFIT	

RESULTS OF FBMA PROGRAMS-- OTHER STATES[1]



FOR EACH DOLLAR INVESTED BY A FARMER IN THE FBMA PROGRAM, A RETURN OF $4.20 WAS RECEIVED.[2]

FOR EACH DOLLAR SPENT ON FBMA, THE COMMUNITY COULD EXPECT TO RECEIVE $9.06 IN INCREASED BUSINESS ACTIVITY FOR THE COMMUNITY.

[1]INVESTMENTS IN EDUCATION FOR FARMERS.

[2]COSTS INCLUDED MINIMUM WAGE FOR ATTENDING CLASS, KEEPING RECORDS, PLUS OTHER ACTUAL COSTS.

SOURCE: UNIVERSITY OF MINNESOTA

GOALS OF FARM BUSINESS MANAGEMENT ANALYSIS

TO PROVIDE FOR:

1. The Development And Evaluation Of Long-Term Plans
2. Improved Record Keeping And Analysis
3. Improved Income Tax Management
4. Financial Management Information
5. Help In Credit Planning
6. Enterprise Analysis

BENEFITS OF FARM BUSINESS MANAGEMENT ANALYSIS

1. Increases Knowledge About Farm Business
2. Identifies Farm And Family Goals
3. Charts Farm Growth And Financial Progress
4. Improves Income Tax Management
5. Improves Use Of Borrowed Capital
6. Improves Chances For Success

SITUATION OF FARMS IN FBMA
AVERAGES FOR THE TOP 1/3, OVERALL, AND BOTTOM 1/3

(All Farms)	1990			1991			1992		
	High	Aver.	Low	High	Aver.	Low	High	Aver.	Low
Number of Farms	50	151	50	47	140	47	39	119	39
Acres	611	537	401	760	587	441	878	683	527
Value of Land in Business	251,300.00	203,669.00	136,220.00	284,766.00	205,379.00	148,702.00	312,077.00	253,420.00	184,487.00
Total Capital in Business	653,548.00	519,726.00	364,989.00	735,778.00	548,235.00	397,881.00	868,381.00	649,337.00	449,242.00
Total Operator's Capital	467,232.00	360,255.00	226,485.00	506,706.00	364,241.00	253,902.00	554,121.00	435,583.00	337,353.00
Net Farm Income Total Farm	77,991.00	48,839.00	21,732.00	70,888.00	37,747.00	16,464.00	103,688.00	63,927.00	37,015.00
Net Operator Farm Income	62,689.00	33,887.00	6,891.00	50,995.00	23,855.00	6,872.00	76,631.00	44,450.00	20,714.00
Percent Return to Capital and Management	13.42	9.41	3.05	10.07	6.55	2.71	13.83	10.21	6.15

POINTS IN SETTING GOALS

1. All Family Members Should Have Input

2. Differences Will Exist Between Family And Business Goals

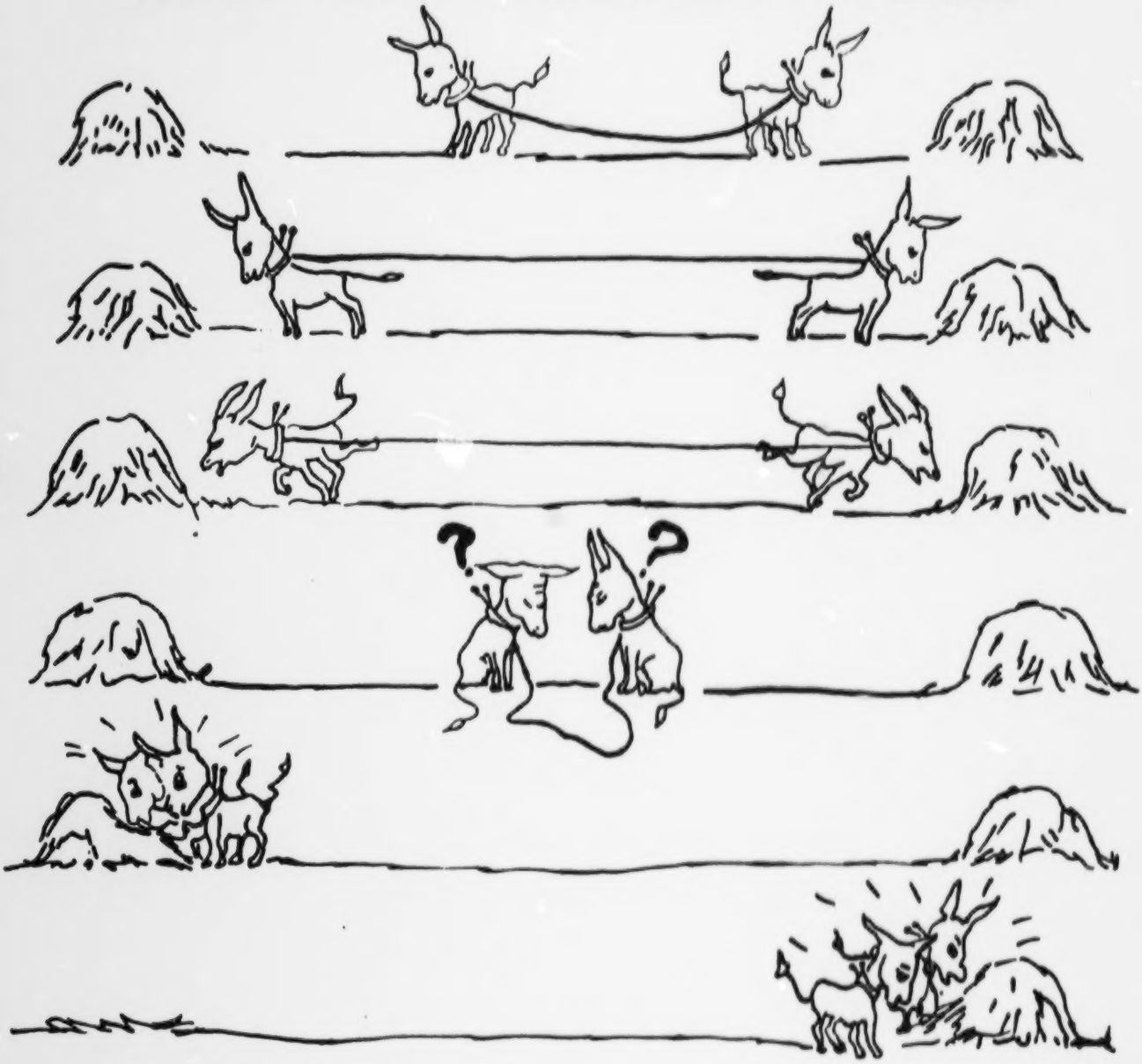
3. Interaction Between Long- And Short-Term Goals Will Occur

4. Goals Should Be Realistic

5. Competition Will Exist Between Goals

6. Goals Will Probably Be Modified Over Time

MUTUAL OBJECTIVES



SUCCESS IS:

REACHING ONE'S GOALS!

FAMILY GOALS

	SHORT TERM	INTERMEDIATE TERM	LONG TERM
HOME:	Home Improvement, Carpeting & New Furniture	Add Family Room	New Home
DEVELOPMENT OF FAMILY MEMBERS:	Develop Better Farming Expertise by Attending Agriculture Education Classes	Send Spouse to Nearby Community College	Send Children to College
SOCIAL AND RECREATION:	Take Minimum 5 Day Family Vacation	Take Longer Trip to California to see Brother	Travel to a Foreign Country
COMMUNITY AND CHURCH INVOLVEMENT:	Attend Church Regularly	Actively Participate in Money-Making Activities	Be a Church Officer
OTHER:			

FARM BUSINESS GOALS

	1 to 2 Years Short Term	3 to 5 Years Intermediate Term	Over 5 Years Long Term
NET INCOME:	$15,000.00	$20,000.00	$25,000.00
SIZE OF FARM:			
A. Acres	120	200	360
B. Sales	$80,000.00	$100,000.00	$120,000.00
C. Investment	$250,000.00	$300,000.00	$400,000.00
FINANCIAL SECURITY:			
A. Savings	0	0	$ 10,000.00
B. Percent Equity	40%	50%	70%
OTHER:			

GOAL SETTING

Name:_____ Date:_____

Address:_____

What do you as a family consider most important for your future welfare, happiness, and security? One of the steps for improving the farm and home business is to clarify what is wanted. You may know of things you have wanted as a family, but it takes considerable thought and discussion among family members to agree upon what is most important and which things come first. As a family, write down your goals for this year and for the future, then number them in order of priority. It is important that goals be reviewed periodically to see if conditions have changed. If the goals are too inflexible, they may be a liability to your progress rather than an asset.

FARM BUSINESS GOALS

	1 TO 2 YEARS SHORT TERM	3 TO 5 YEARS INTERMEDIATE TERM	OVER 5 YEARS LONG TERM
NET INCOME:			
SIZE OF FARM: A. ACRES B. SALES C. INVESTMENT			
FINANCIAL SECURITY: A. SAVINGS B. PERCENT EQUITY			
OTHER:			

FAMILY GOALS

	Short Term	Intermediate Term	Long Term
Home:			
Development of Family Members:			
Social and Recreation:			
Community and Church Involvement:			
Other:			

(NOTE: These headings are given only as a guide for possible areas to be considered; other headings or subheadings may be added. Goals should be set in quantitative terms in order to measure progress toward attainment of your goals. Quantitative terms may include amount of income, size of farm, percent increase in net worth, amount of income spent on home and development of family members.)

RATE YOUR GOALS

Rate the following goals in terms of their importance to you. Check number 1 if the goal is most important, etc.

		1	2	3	4	5
1.	To provide more leisure time to engage in hobbies, to enjoy good friends, and for self improvement.					
2.	To provide an attractive, comfortable, and efficient home to meet family needs and happiness.					
3.	To provide the needs of a job or business operation with modern tools, equipment or buildings before improving the home.					
4.	To provide economic security (to be reasonably certain of insuring an income adequate for family needs).					
5.	To provide for the needs of the home, using credit and other income before improving the business operation or job needs.					
6.	To provide financially for good educational opportunities for the children.					
7.	To enjoy good health.					
8.	To provide as much income as possible from a business operation or employment.					
9.	To provide income levels from a farm business that will enable the operator to maintain freedom and independence.					
10.	To help plan and use influence in guiding policies and activities in the community for worthwhile purposes.					

HO-1.4
October, 1993
jr

CLASSIFY FARM AS: ____
1. Usable
2. Non-usable
3. Non-typical
4. Not Applicable

FBMA ENROLLMENT FORM

(Top part filled out by all enrollees yearly.)

(Please print)
School_____ Instructor_____ Date _____

1. _____ (Name) 2. _____ (County)

3. _____ / _____ / _____
(County No.) (Farm No.) (Fieldman No.)

4. _____
(Route) (City) (State) (Zip Code)

5. _____ / _____ 6. _____
(Area Code) (Phone Number) (No. of Years in Program)

7. _____ 8. _____ 9. _____
(Expense Election Limit) (Tenure) (Type of Lease)

10. _____ 11. _____
(Year of Operator's Birth) (Age of Oldest Dependent Child)

12. _____ 13. _____
(Number in Family Supported) (Social Security No.)

****

(Numbers 14-19 to be filled out by new enrollees only.)

14. _____ 15. _____
(Employer I.D. No.) (Last Month of Fiscal Year)

16. _____
(Cash or Accrual)

17. Land Basis (List each farm separately as purchased only if you want land basis shown on depreciation schedule.)

Farm Name	No. of Acres	Date of Purchase Month/Year	Basis

18. Basis of Residence (if you want it shown on depreciation schedule)

_____ _____
(Date of Purchase (Basis)

INSTRUCTIONS

1. Name--print name(s) as you would want it (them) shown on the Schedule F. Include both names if multiple operators, as two brothers farming together.

2. County--in which enrollee resides.

3. County, Farm, and Fieldman Numbers--these are found at the top of any computer print-out you have received.

4. Address--as shown.

5. Phone--include area code.

6. No. of Years in Program--as shown.

7. Expense Election Limit--the limit for 1986 is $5,000; $10,000 for 1987 and thereafter.

8. Tenure--indicate one of the following: owner, part-owner, or renter.

9. Type of Lease--indicate one of the following: crop share or crop share cash, livestock share, cash, mixed.

10. Year of Operator's Birth--as shown.

11. Age of Oldest Dependent Child--as shown.

12. Number in Family Supported--number of dependents.

13. Social Security Number--of operator.

14. Employer I.D.--used by farmers with employees on which social security and/or income tax is withheld.

15. Fiscal Year--last month of year when records are closed for tax purposes. For most farmers it is December.

16. Cash or Accrual--indicate whether on cash or accrual income tax reporting system.

17. Land Basis--land basis is the original cost of farm minus the value of buildings when entered on the depreciation schedule minus the value of the operator's home at that time, plus cost of improvements not deducted as operation cost or depreciation. As an example, if $100,000 was paid for the farm in 1960 and the value of buildings on the depreciation schedule was $30,000 and the value of the operator's residence was $10,000; the land basis is $60,000. There is space for three different purchases; write in others if needed. Identify each farm with a name that would identify the farm for the farmer as the "Jones Farm" or "Southwest 80."

18. Residence--the value placed on the operator's residence at time of purchase and improvements minus normal depreciation.

FARM BUSINESS MANAGEMENT ANALYSIS

Unit I: Establishing a Farm Accounting System

Lesson 2: Introduction to Keeping Records

A. Review

The previous lesson, Orientation to the Farm Business Management Analysis Program, should be reviewed. List all conclusions reached at your last meeting. Possible conclusions may have included:

1. The FBMA program is designed to assist enrollees in achieving success (reaching their goals).

2. The FBMA program is planned for three or more years and includes classroom and individual instruction, plus a computer analysis of records.

3. The record analysis phase will provide information the enrollee can use in making decisions.

4. The adult program is part of the total agriculture education program at the school.

5. Success is reaching our goals.

6. Family/business, short-/long-range, and $10/$10,000 type goals are needed.

7. All members of the family need to be involved in setting goals.

8.

B. Objective

To understand the importance of farm records.

C. Motivation

Have a pint jar filled with soybeans or another large seed crop. Prior to filling the jar, insert an inverted paper cup or other object. Be sure it is not visible. Have enrollees guess how many beans are in the jar. Record their guesses on the board. After everyone has had an opportunity to guess, ask the enrollees to identify factors (such as size of the jar, size of the beans,

etc.) that influenced their guesses. Record these on the board. When the list is complete, announce the winner and award a prize to the winner. (Suggested prizes include: small tool, dealer cap, pound of coffee, sponsored gift certificate.) Next, pour the beans out to reveal the object that took up space. Close by pointing out that their guesses would have been more accurate if they had a "record" of your activity in filling the jar. That is the purpose of records--to provide accurate information on which to make decisions.

D. Key Points

Key points that will be accomplished are as follows:

1. *How much do farm earnings vary from year to year?*

2. *What causes variation in farm earnings?*

3. *How do records help? (Why should I keep records?)*

4. *What records will I need? What other records will I want?*

5. *What are some general suggestions for starting a record keeping system?*

E. Introduction of Information

Start the introduction of information by pointing out that the need for financial planning will be emphasized in the first part of the lesson and then tied in with the need for good records to provide information to the farm operator.

1. *How much do farm earnings vary from year to year?*

a. Tell the class that the operator's average net income for farms participating in the FBMA Program from 1989-1992 (4 years) was $31,1661. Show TM-2.1 or refer to the current FBMA Summary of Records. Explain the chart.

b. Show TM-2.2 to show the effect of equity on available cash. This illustrates why an older farmer (maybe a father) can have a satisfactory standard of living, etc., with a certain operation if it is all paid for and a young farmer (maybe the son) with an identical operation couldn't make it. The effect of adjusting family living could also be shown.

Summarize this key point by reemphasizing that there will be variation in income from year to year, and we need to do financial management and planning to allow for it. Adequate records are necessary for this planning to occur.

2. ***What causes variation in farm earnings?***

   a. Show TM-2.3, enterprise analysis variations.

   b. Ask the class to identify reasons for variation in income between farms. List these on the board as they are suggested and put them into two columns: those that can be controlled and those that cannot be controlled.

   c. Show the Profile of Farm Business graph from the FBMA Summary of Records to illustrate some factors that influence farm income. Show TM-2.4 to point out that on an average, the more factors above average, the higher the farm earnings.

   d. Show TM-2.5 to illustrate characteristics of farmers that get more of these factors to an above-average level. Emphasize that none of us have all of these characteristics all of the time.

3. ***How do records help? (Why should I keep records?)***

First, point out that we will deal with four levels of recording keeping in FBMA. Each level will build on the others, and it is imperative that each level is mastered before in-depth analysis is undertaken.

   a. Level 1 record keeping provides simple records of cash receipts, cash expenditures, and farm depreciation that provide an accurate farm tax record. All farmers need this level of record keeping to meet IRS requirements in tax reporting. A mastery of this level is required before moving on to level 2.

   b. Level 2 records will add maintaining of complete inventory control to the level 1 cash system, allowing for accrual accounting of the farming operation. This level is required to measure true net worth change from year to year. Net worth reconciliation is a good measure of the success of this level.

   c. Level 3 record keeping will provide additional information to levels 1 and 2 to allow for total farm analysis. At this level all farm production costs and returns are measured.

d. Level 4 record keeping requires the complete break down of new crop and livestock expenses and receipts. At this level we are able to measure the enterprise returns for each production cycle. This level of record keeping will facilitate in-depth total farm and enterprise analysis.

Show TM-2.6 to lead the discussion on "Why Keep Records." The following points may provide additional information to use while discussing TM-2.6:

a. External Reasons--These are reasons that affect decisions as a result of relations with others. They include the following:

(1) Correct and defensible income tax reporting. IRS income tax reports and audits are "painful" in proportion to the lack of adequate records. Farmers with adequate records find it much simpler to complete tax returns and defend them in case of an audit. The FBMA computer program will provide a 1040F and keep depreciation records.

(2) Tax management. Let's consider a family of four that has an adjusted gross income of $30,000 one year and zero the next. If they take a standard deduction and no tax credits, they would pay $2,216 based on 1992 rates. The same family that earned $15,000 per year would pay $0 each year; they would have a tax savings of $2,216 as a result of planning. We can never achieve a perfectly level figure, but we can work towards it. Teacher note: Social security taxes are not considered above because they are the same in both situations.

It is advisable to always have at least $15,000 of adjusted gross income to take advantage of standard deductions.

(3) Self-employment social security taxes. Because these are paid only on certain farm income, a good set of records is necessary. The rate is 15.390 percent in 1992 up to an income of $55,500.

(4) Social security taxes on hired labor. This has become an important factor because many farmers will have employees that meet the minimum requirement. Employers are required to make reports and pay social security tax on any employee who receives $150 or more in cash wages in a year, or if you paid wages of $2,500 or

more during the year. The rate for 1992 is 7.65 percent (matched with 7.65 percent) on wages up to $55,500. Teacher note: Refer to current Employer's Tax Guide and Farmer's Tax Guide for specific outlines and procedures.

(5) Good credit relations. As credit usage has increased, lenders are placing more emphasis on good records. In an ideal situation, creditors like to have a Net Worth or Financial Statement, a Profit and Loss Statement and Cash Summary for the current year, and a projected Cash Flow for the next year. Some creditors offer reduced interest rates to customers who can supply the above information and are good financial managers. At the time of this revision, a Farm Financial Standards Task Force completed Financial Guidelines for Agriculture. Because the American Banking Association supported the task force, we can assume they will also support the use of the guidelines.

(6) Sound credit planning. Farmers need adequate records to develop a reasonably accurate cash flow that will identify credit needs and repayment capacity. Maintaining a balance between assets and liabilities is important, but knowing when you will need additional support in the form of credit could save a business.

(7) Business continuity. Many farmers will do estate planning with the intent of helping another generation start farming. You or someone will need to establish the original basis of all property owned at the time you sell or transfer your real estate and other real property. If no planning is done, this information is also needed when settling your estate.

(8) Landlord-tenant relationship. Many farm business operators rent land, facilities and the like. Furthermore, many farm partnerships can involve the entire business or only one or two aspects of the business. Periodic and end-of-the-year settlements concerning shared receipts and expenses must be substantiated through an adequate record system.

b. Internal Reasons--These are probably more important than the external reasons just discussed. They are more directly related to the primary goal of any farm business--to make a profit.

Internal reasons for establishing and maintaining a current and accurate set of farm records include the following:

(1) Identify strong and weak parts of the business. Records will help you answer important questions such as: Is my business too small? Which parts of my business should I expand? Which parts should I decrease? Do I really have my costs of operations under control?

(If time permits, you may want to have the enrollees try to answer the above questions. If answers are provided, have the enrollees substantiate or "document" their answers. Presumably, this would be difficult for them, and you could summarize by saying that records would help you make such decisions more easily and with more confidence.)

(2) Plan business changes. An active, profitable business will not and should not become stagnant. That is, changes will occur. These will be more beneficial if they are planned changes and they relate directly to your individual farm data. Budgeting, estimating income and expenses, and planning other changes in the farm business will be much more accurate if records, particularly records from your farm operation, are used. For example, if it is requiring four pounds of feed to yield one pound of gain on your hogs, you would want to use this figure when making pertinent decisions, rather than using a state average.

(3) Operation and control of the business. To set goals and plan changes is one thing, but to evaluate those goals and plans is another. Records perpetuate records, which perpetuate records, which . . . . For example, last year's records can be used to evaluate this year's accomplishments, and this year's records can help you set goals for next year's operation. Furthermore, comparisons over time allow you to recognize declining trends before catastrophes occur. Thus, you can proceed with corrective measures. To take this a step further, even after corrective measures have been implemented, your records serve as an evaluator of how well the corrections worked.

To summarize key point number 3, "Why should I keep records?," mention that records are necessary for any individual operating a

business. Farmers engaged in farming are no exception. The many reasons for and importance of keeping current, accurate records cannot be overemphasized. The time you spend making entries will be repeatedly returned in time saved with respect to income tax reporting, making business decisions, establishing credit and the like.

4. ***What records will I need? What other records will I want?***

Many enrollees will confuse records with computers. It should be pointed out at this time that the computer is simply a tool to help with record keeping. It in itself is not a record keeping system. It is important that the enrollees understand that they will need a basic understanding of the overall record keeping system used in FBMA. The computer will be a very helpful tool for them to use in their overall record keeping system, but the computer will be of little value and may even be a liability if they don't have a basic understanding of what records are required for each level of record keeping.

With the present day costs and quality of computer systems and record keeping software, the goal of all FBMA enrollees may be to have their own computer record keeping system. In fact, that may be the reason they are in the FBMA program.

Distribute record books--one per farm business. Have class members insert color coded dividers with the appropriate color coded forms.

a. Turn to the receipt (green) section of the Sample Entries for the Missouri Farm Business Record Book (Answer Key), Form 1. Point out that receipts include all cash received, including money borrowed and non-farm income. (Farmers with a separate checking account for family living should enter non-farm income only on Form 6.) This record book is a columnar type bookkeeping system (not double entry); however, every entry is listed a minimum of two times to provide a check for math accuracy--the total of all columns must equal the total of the "Total Receipt" Column as shown by the instructions on the back of Form 1. Entries are made in the separate columns because of tax treatment and analysis of the business. Also, notice that all "cash" columns are numbered. These correspond with line numbers on the summary page, Form 27. Suggest that they use a separate form for each month even if all lines are not used.

b. Use the sample entries to provide an overview of Form 2. Discuss the "Non-Breeding Livestock" section, Columns 15 through 17. Note that Form 2 will handle three separate

enterprises, which are labeled by the recorder at the top of each column. Call attention to the abbreviations, "bot" and "rsd." These mean "bought" and "raised" and refer to how the cost of livestock is deducted for taxes. Purchased livestock is deducted in the year sold. Raised livestock costs are deducted as operating expenses. The other part of Form 2 is for recording "Patronage Dividends, Resales and Settlements, and Cash Rent."

c. Use the sample entries to provide an overview of Form 3. Have the enrollees turn to Form 3 in their record books. Point out that when they make entries, they must be careful to make sure the lines are straight. The shaded lines are helpful in this respect. Note that over half of the form is provided to record "Other Farm Receipts." "Livestock Products" is for recording sales of, for example, milk, eggs. Note the headings in Columns 18, 19, and 20 are available for labeling, plus space for "Quantity" is provided.

d. Use the sample entries to provide an overview of Form 4. Point out that this form allows the receipts of livestock to be divided by enterprise. Again, the columns should be labeled such as SWINE, CATTLE, etc. Note that over half of the form is provided to record sales of "Breeding Livestock." This section is separated from other columns because the reporting of this income is handled differently on income tax forms. "Qualify" and "Not Qualify" refer to qualifying for capital gains tax. Column 30 is for recording machinery, equipment, and building sales, as well as land. Column 31 is for recording money borrowed for farm use.

e. Use the sample entries to show "Distribution of Enterprise Receipts" on Form 5. Note the blank column labels provided for different enterprises. The columns for item description, quantity, etc., as well as dollar amount, are provided.

f. Use the sample entries to show "Non-Farm and Personal Receipts," Form 6. The column numbers P1 through P12 correspond to row numbers on Form 28, "Non-Farm and Personal Cash Flow." Columns P10 through P12 are for "Other Non-Farm Income" to be labeled accordingly.

g. Have the enrollees turn to the expenditure (pink) section in their record books. This section contains Forms 7, 8, 9, 10, 11 and 12. As with receipts, a set of forms should be used each month. Explain that this section is used to record expenditures

that include all money and goods leaving the cash flow of the business. Have them turn to Form 7. Use the sample entries to present an overview of Form 7. Point out that this form is used to record a variety of expenses. General information required concerning the "Description" is the same as the receipts form except that a column for check number is included here. Many abbreviations are used on this form and throughout the record book. They may seem strange at first, but they will become more familiar with actual practice making entries. Columns 35 through 38 are for recording expenses that can be assigned to a specific enterprise, as shown in the sample entries.

h. Use the sample entries to provide an overview of Form 8. Point out that it is an extension of Form 7 primarily used for recording overhead expenses that are not directly related to a single enterprise. Forms 7, 8, and 9 are important references for making tax deductions.

i. Have the enrollees turn to Forms 9 and 10. Use the sample entries to explain Form 9. Use the sample entries to provide an overview of Form 10. Mention that Columns 58 through 63, labeled "New Farm Investments," will be handled differently for income tax reporting. "Non-Breeding Livestock" expenses are deductible upon sale. "Breeding Livestock," along with "Machinery, Equipment and Fence" and "Land and Buildings," are depreciated. For example, Columns 58 and 59 are for recording the purchase of "Non-Breeding Livestock," which is an expense that can be deducted on tax forms in the year the item is sold. Columns 60 and 61 are for the purchase of "Breeding Livestock" that is deducted through depreciation. Expenses concerning "Machinery, Equipment and Fence" and "Land and Buildings," entered in Columns 62 and 63, will also be depreciated. Entries in Column 63 will be transferred to Forms 19 and 20. Column 64 is for recording principal paid on loans.

j. Use the sample entries to present an overview of Form 11. Point out that it is used very similarly to the receipts Form 5. The columns on Form 11 permit the farmer to record expenses under individual enterprises. The figures on this form will usually be transferred from entries on Forms 7, 8, and 9. The headings on Form 11 should be the same as those on Form 5.

k. Use the sample entries to show "Non-Farm and Personal Expenditures," Form 12. Columns P13 through P29 are

numbers corresponding to Form 28, "Non-Farm and Personal Cash Flow."

1. The remainder of the forms in the record book can be referred to without the use of the sample entries. Use a copy of the record book to "walk through" the remaining sections. Have the enrollees refer to the forms as you make the following comments:

   (1) As the enrollees turn to the "Depreciation Schedules, Inventory and Real Estate Investments" (yellow) section, point out that Forms 13 through 20 are included. The back of Form 13 contains directions for completing depreciation, inventory, and real estate forms.

   (2) Forms 13 and 14 are used to develop and maintain depreciation schedules on machinery and equipment. Forms 15 and 16 are depreciation schedules for breeding livestock. The specific use of these forms will be discussed in future lessons.

   (3) Forms 17 and 18 are used to maintain detailed inventories. More specifically, Form 17 is for recording a livestock inventory while Form 18 is for inventorying various items such as feed, stored crops, growing crops, and crop and livestock supplies.

   (4) Form 19 is titled, "Real Estate Investment and Depreciation Record," and it is designed to arrive at an estimated current market value for permanent buildings, fences, etc., as well as land. Individuals with more than one farm may want to maintain one Form 19 for each farm.

   (5) The next (blue) section of the record book is for recording hired labor and credit entries. It contains Forms 21 through 24. The back of Form 21 contains the directions for making entries.

   (6) Form 21 is for a record of detailed information related to hired labor. The employer is required to withhold social security if an employee is paid $150 or more cash wages per year or if the employer pays wages of $2,500 or more during the year. Federal and state income tax withholding is optional--both the employer and employee must agree to withhold. Such deductions can be

recorded on Form 21. Form 22 is for Independent Contractors. This form should be completed for any (IRS) 1099-INT or 1099-MISC forms (if you make payments of $600 or more).

(7) Form 23 is called the "Intermediate and Long-Term Multipayment Note and Mortgage Record." Intermediate loans are due within two to ten years, while long-term loans usually extend beyond ten years. In most cases, entries concerning payments would be made monthly. Larger businesses may need additional copies to maintain adequate loan and interest records. Each Form 23 will accommodate three separate loans.

(8) Form 24 is for short-term loans and line of credit loans. Space is provided for interest records. A loan is generally considered short term if it is due in less than a year.

(9) The next major (grey) section of the record book is for summary and analysis. The five forms in the summary section are Form 25, "Book Value: Financial Statement;" Form 26, "Market Value: Financial Statement;" Form 27, "Farm Business Cash Flow;" Form 28, "Non-Farm and Personal Cash Flow;" and Form 29, "Profit or Loss Statement." These forms are very important for summarizing and analyzing the records entered in previous sections of the record book.

(10) Have the enrollees remove Form 27 from the record book. There are two copies of Form 27 in the record book. One is to be used at the start of the year to plan an estimated cash flow. The second is to be used as a summary and should be tallied at the end of each month. The form is long and has columns for entries on one side.

(11) The financial statements, Forms 25 and 26, are usually completed the first day of the year. Most of the figures are obtained from other forms in the record book. The forms help the farm operator determine total net worth, which is one of the best measures of financial progress.

(12) The "Profit or Loss Statement," Form 29, is usually completed at the end of each year. Most figures are obtained from other forms and are used to tell how much an operation earned. It shows cash balance plus or

minus inventory changes and allows comparison of income producing ability over a period of years. Point out to the enrollee that Form 29 will have more emphasis for them after they complete most other records for the year.

m. If time permits, show TM-2.7 and use it to summarize.

5. ***What are some general suggestions for starting a record keeping system?***

Have the students turn to the Introduction Pages in their record book so they can follow the discussion. The following points may provide additional suggestions for discussion.

a. Enter receipts and expenditures daily or weekly. This distributes the record work and helps keep records up to date.

b. Use a sharp lead pencil. This will help keep records legible and allow erasures. Records will be of little use if they cannot be read easily.

c. Use <u>one</u> method for making entries. There are several different ways of recording entries; however, it is advantageous to select and use one method at the start of the year.

(1) Make entries when purchased or sold. This is regardless of whether cash or credit was used. It will be helpful to use sales slips. One of the difficulties with this method is that the record book and bank balances will not match exactly. Adjustments will be necessary at the end of the year for "Cash Basis" tax reporting.

(2) Make entries when paid or when payment is received. If a lump sum payment for different items such as feed, fertilizer and other products is made, it will have to be divided to be entered properly in the record book. Itemized receipts will help in maintaining such details.

d. Paper clip the currently used form of each section to the section tab. It is important to do this each month. This will help prevent entries from being entered for the wrong month on the wrong form. Also, the clips keep the recorder from having to thumb through the record book to find the right form before making every entry.

e. Set up a filing system. It is helpful to keep a separate folder containing receipts and bills that occur each month. A larger operator may want to keep receipts and bills in two separate folders for each month because there are so many. Suppose, for example, a question arises concerning a bill for fertilizer. A quick glance in the record book indicates in which month the expenditure occurred. Thus, a copy of a receipt or check referring to the transaction is easily retrieved.

f. Maintain two bank accounts. Bookkeeping will be more accurate if you have two accounts, one for the farm business only and one for family expenditures. Although this is advisable, it is not necessary. The Missouri Farm Business Record Book is designed to accommodate both farm business and family records.

g. Pay by check. If the farmer pays expenses by check, there is always a written receipt to verify the transaction. Form 7 in the expenditures section has a column labeled "Check Number." This can be used at the end of the month to match with the bank statement's list of checks.

h. Keep records in a safe place. Records should be stored in a fireproof metal container or safe. Records are important, but they are especially important if a catastrophe occurs.

F. Discussion

Sufficient time should be allotted to allow enrollees to ask general questions they may have concerning the use of the Missouri Farm Business Record Book.

G. Conclusions

Conclusions that may be reached include:

1. Variation in income from year to year will occur. As a result, we need to apply sound financial management practices.

2. Many factors cause variation in income between farms.

3. There are many reasons for keeping current, accurate records. Two primary reasons are defensible tax reporting and total business analysis.

4. The Missouri Farm Business Record Book is divided into sections according to types of records. Most farm business operators will use most of the sections.

5. There are several procedures for making record keeping easier and more efficient. Most enrollees will develop their own techniques as the year progresses.

6.

Announcements

You may want to distribute HO-3.3, Lesson 3, Quiz--Receipts and Expenditures, so the enrollees can complete it at home rather than take up a lot of class time at the beginning of Lesson 3.

Encourage the enrollees to review the record book at home at their leisure paying particular attention to the general directions on the tabs. Remind them that recording receipts and expenditures will be the topic for the next session.

Social

Individual Instruction

The purpose of this meeting is to become aware of the business enough that you can answer specific questions on record keeping in the next lessons. Complete the farm and family goals at this time, and if you are not acquainted with the farm, take a tour to learn more about the current level of management. This meeting should also include discussion of office location, calculator, etc.

Materials Needed

Instructor

Jar with soybeans/paper cone
Prize for contest winner
Missouri Farm Business Record Book
Sample Entries For The Missouri Farm Business Record Book (Answer Key)
Farmer's Tax Guide (current year)
Employer's Tax Guide (current year)
FBMA Summary of Records (current year's copy from FBMA state office)
TM-2.1 FBMA Selected Averages Comparison 1985-1992

TM-2.2	Influence of Equity on Cash
TM-2.3	Enterprise Analysis Comparison
TM-2.4	Effect of Number of Factors Above Average
TM-2.5	Management Traits Common to Successful Farmers
TM-2.6	Why Keep Records
TM-2.7	Types of Records to Keep

Student

Missouri Farm Business Record Book (one for each farm business)

** FBMA TOTAL RETURN COMPARISON 1985-1992 **

Item	1985 Averages	1986 Averages	1987 Averages	1988 Averages	1989 Averages	1990 Averages	1991 Averages	1992 Averages
Total Farm								
Crop Returns/TA	$168.90	$118.21	$140.10	$160.79	$173.88	$164.15	$152.03	$180.66
Livestock Returns Above Feed/TA	$36.91	$66.57	$68.48	$46.35	$44.87	$76.51	$48.99	$50.02
Gross Value of Farm Prod/TA	$223.11	$211.65	$246.50	$240.11	$229.98	$252.04	$212.03	$240.41
Total Non-Feed Costs/TA	$249.81	$196.05	$206.93	$213.01	$207.45	$222.76	$202.60	$200.92
Rate Earned-Landlord % Rate Earned-Total Farm %	10.19% 3.99%	8.50% 7.77%	9.08% 10.52%	7.97% 8.98%	8.51% 8.25%	9.02% 9.32%	7.51% 6.97%	9.06% 9.96%
Net Farm Income	$32,915	$34,806	$50,055	$42,313	$42,096	$48,839	$37,747	$63,927
Management Returns	($12,407)	$7,806	$20,787	$13,001	$12,218	$16,212	$5,677	$27,621
Operator								
Total Operating Expense	$60,771	$58,776	$67,205	$61,078	$69,909	$78,663	$78,333	$90,619
Net Farm Income	$13,703	$19,610	$32,193	$28,852	$24,453	$33,887	$23,855	$44,450
Management Returns	($23,842)	($10)	$10,989	$6,462	$3,134	$8,426	($539)	$17,112
Capital Purchases	$8,016	$9,178	$11,989	$11,445	$11,610	$17,318	$15,134	$12,320
Cash Interest Paid	$13,008	$12,312	$10,980	$9,945	$10,599	$12,063	$12,192	$12,758
Net Worth	$194,079	$177,461	$181,155	$189,360	$226,397	$244,574	$239,988	$284,641

INFLUENCE OF EQUITY ON CASH*

Percent Owner Equity	100	75	50
Gross Sales	$60,000.00	$60,000.00	$60,000.00
Earnings	$20 000.00	$20,000.00	$20,000.00
Interest	---	$6,200.00	$12,500.00
Income & S.S. Tax	$4,300.00	$2,300.00	$700.00
Family Living	$13,000.00	$13,000.00	$13,000.00
Available Cash	$2,700.00	-$1,500.00	-$6,200.00

* AGRICULTURAL ECONOMICS, UMC.

ENTERPRISE ANALYSIS

(1990) HOGS Ent. 301	AVERAGE	HIGH	LOW
TOTAL # PRODUCED	269426	182200	181791
TOTAL $ RETURN	$143,483.00	$98,989.00	$90,120.00
RETURN PER 100 #	$51.48	$54.32	$49.57
GRAIN & ROUGHAGE	$13.76	$12.52	$18.44
PROTEIN & COMPLETE	$12.88	$13.50	$11.87
RETURN ABOVE FEED	$24.84	$28.30	$19.26
Lvstk Supplies & Serv	$0.56	$0.85	$0.00
Vet & Medicine	$1.65	$0.55	$1.12
Machinery Repair	$0.70	$0.27	$1.49
Machinery Hire	$0.44	$0.00	$0.71
Fuel & Oil	$0.75	$0.77	$1.65
Utilities	$0.58	$1.15	$0.82
Interest	$1.17	$0.00	$3.02
Hired Labor	$1.07	$0.00	$2.20
Bldg. Repair	$0.60	$0.09	$1.42
Insurance	$0.30	$0.16	$1.10
Auto-Farm Share	$0.08	$0.54	$0.00
Misc.	$0.64	$0.09	$0.45
OPERATING EXPENSE	$8.54	$4.47	$13.98
RETURN PER 100 #	$16.30	$23.83	$5.28

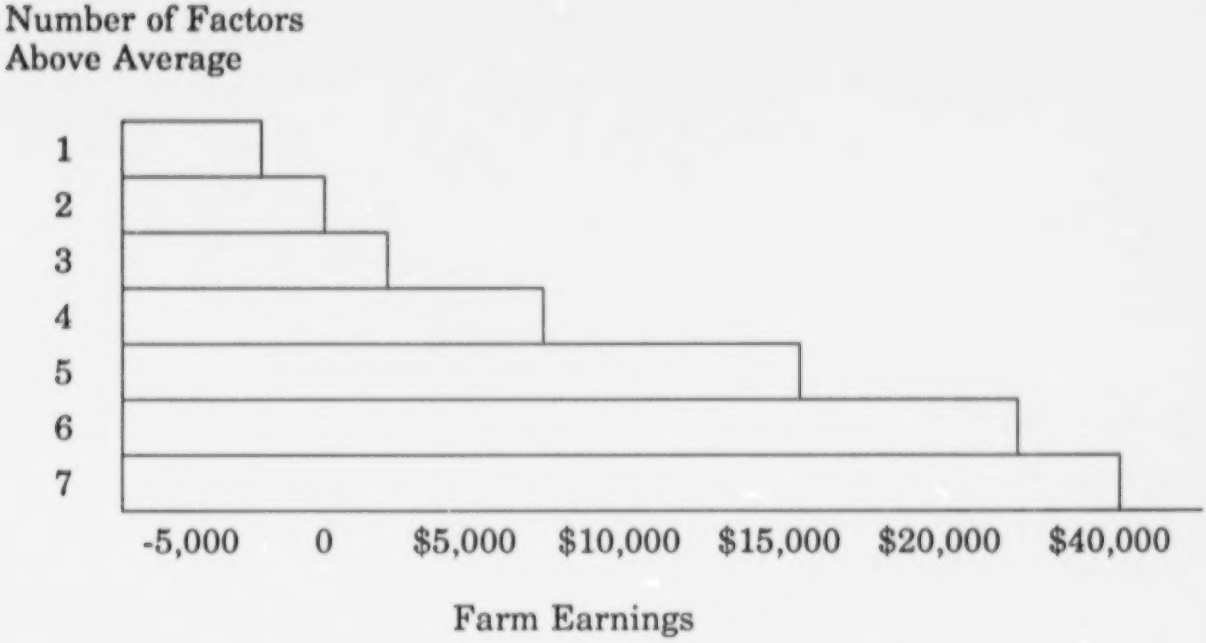
* Based on Return Per 100# - 1990 FBMA averages

ENTERPRISE ANALYSIS

Corn	AVERAGE	HIGH	LOW
Acres of Corn	118.94	160.00	185.00
Yield P/A	105.21	106.25	101.11
Value P/A	$285.95	$263.50	$250.75
Fertilizer	$46.61	$28.50	$64.52
Chemicals/ Supplies	$15.05	$9.28	$13.80
Seed	$18.14	$20.50	$19.38
Drying & Storage	$1.02	$0.00	$0.00
Utilities	$4.24	$0.81	$3.22
Machine Repair	$11.81	$14.08	$10.90
Machine Hire	$5.65	$3.95	$2.07
Fuel & Oil	$11.81	$9.12	$13.89
Auto-Farm Share	$1.23	$0.00	$0.00
Interest	$27.52	$4.26	$41.05
Hired Labor	$3.51	$0.00	$0.00
Bldg. Repair	$0.74	$0.00	$0.37
Insurance	$8.97	$3.70	$19.37
Misc.	$5.40	$2.25	$6.20
TOTAL EXPENSE	$161.71	$96.45	$194.77
RETURN P/A	$97.24	$167.05	$55.98

Average 1990 data is limited to those enrolled in FBMA program and identified as "clean" (local instructor indicated the records were accurate and the computer program did not flag errors).

EFFECT OF NUMBER OF FACTORS* ABOVE AVERAGE



*Factors were:

--Index of crop yields
--Percent of land in high return crops
--Return from livestock/$100 feed fed
--Amount of livestock per 100 acres
--Size of business--total work units
--Labor efficiency--work units/man
--Power, Machinery, Building expense per worker

MANAGEMENT TRAITS COMMON TO SUCCESSFUL FARMERS[1]

1. FOLLOW WORK PLAN THAT KEEPS THEM ON SCHEDULE OR AHEAD
2. ANTICIPATE PROBLEMS--REPAIR EQUIPMENT AHEAD OF SEASONAL USE
3. EASE HEAVY WORKLOAD BY DOING SOME THINGS DURING SLACK PERIODS
4. MAKE NO LARGE EXPENDITURES WITHOUT ARITHMETICAL CALCULATIONS
5. MAKE MAXIMUM USE OF AVAILABLE RESOURCES
6. SET GOALS TO WHICH THEY ADHERE RATHER RIGIDLY
7. TEND TO BE CONSISTENT
8. HAVE GOOD CREDIT RATING
9. HAVE HIGH SALES RESISTANCE
10. ARE AMBITIOUS

[1] USING FARM ANALYSIS INFORMATION, CHARLES PAINTER, UNIVERSITY OF MINNESOTA

WHY KEEP RECORDS

1. EXTERNAL REASONS
   - A. Income Tax Reporting
   - B. Tax Management
   - C. Self-Employment Social Security Taxes
   - D. Social Security Taxes on Hired Labor
   - E. Credit Relations
   - F. Sound Credit Planning
   - G. Business Continuity
   - H. Landlord/Tenant Relationships
2. INTERNAL REASONS
   - A. Identify Strengths and Weaknesses of Business
   - B. Plan Business Changes
   - C. Operation and Control of the Business

TYPES OF RECORDS TO KEEP

1. Cash Receipts (Income)
2. Cash Expenditures
3. Inventories
4. Depreciation Schedules
   - A. Livestock
   - B. Machinery and Equipment
   - C. Land and Buildings
5. Family Living Records
6. Enterprise Accounts
7. Cash Flow
8. Financial Statement (Net Worth)
9. Profit and Loss Statement

FARM BUSINESS MANAGEMENT ANALYSIS

Unit I: Establishing a Farm Accounting System

Lesson 3: Recording Receipts and Expenditures

A. Review

The previous lesson, Introduction to Keeping Records, should be reviewed. List all conclusions reached at your last meeting so that class members will be able to see an overall picture of what the record book can do for them. Possible conclusions may have included:

1. Good records are necessary for a farmer because, as a businessperson, income varies from factors within and beyond the farmer's control.

2. There are four levels of record keeping involved with the FBMA program. Each level builds on the others.

3. Accurate records are a must for reporting income tax and assisting in tax management.

4. Proper records are beneficial and needed for working with lenders and obtaining credit.

5. With a satisfactory records system, a farmer can more easily evaluate each enterprise as to its profitability.

6. Records are necessary for making an analysis of the farm business by determining strong and weak points followed by planning changes for the future.

7. It is important to develop your personal record keeping procedure. This includes a regular time of making entries, using a suitable filing system for receipts and bills, and using one method of recording entries.

8. Safety factors in record keeping such as always paying by check and using an adding machine or calculator with a tape are important to follow.

9.

B. Objective

To correctly enter receipts and expenditures and develop a summary of yearly receipts and expenditures that can be utilized in developing a summary cash flow.

C. Motivation

Tell a story about the farmer that put all of his bills and canceled checks in empty boxes in which he had previously purchased rubber boots. At the end of the year, he would take the boxes to his local lawyer to have his income taxes figured.

The farmer measured his volume of business during the year by the number of boxes filled with receipts and checks that he had accumulated during the year.

The lawyer always charged a high fee for completing the income tax forms because of the amount of time necessary to arrange the mess into a usable form.

Point out the problem of the method described in the motivational section as being one of needing a system for sorting and recording. Have enrollees evaluate this system as well as other systems commonly used in the community.

Other weaknesses, such as costs, knowledge of the business, and losses of receipts and checks, may be pointed out.

Classifying receipts and expenditures is the foundation of the record keeping system. Many problems incurred in the summary and analysis of records are the result of errors in recording receipts and expenditures. Explain the recording of sale of raised breeding sows in the fat hogs column would result in the paying of 15.3% more self-employment tax.

If the quiz on HO-3.3 was distributed at the conclusion of the previous lesson, it should be reviewed at this time. If not, this is an appropriate time for provision of the quiz with correct answers.

D. Key Points

Key points that will be accomplished are as follows:

1. *How are operating and capital receipts recorded?*

2. *How is an accuracy check for receipts completed?*

3. *How are loan repayments, operating and capital expenditures recorded?*

4. *How is an accuracy check for expenditures completed?*

5. *How are monthly totals transferred to the cash flow summary?*

E. Introduction of Information

Start the introduction of information by pointing out that most of the lesson time will be spent on learning to enter practice receipts and expenditures. The practice entries are designed to demonstrate examples of common buying and selling situations of farmers.

1. *How are operating and capital receipts recorded?*

Have enrollees turn to Forms 1, 2, 3, 4, 5 and 6 in the Missouri Farm Business Record Book to use for practice. Forms used in the record book for practice should be replaced later with new forms. The enrollees may want to keep the practice forms in the back of the book for reference. It should be noted that these forms are for recording receipts (money coming into the business). Columns are grouped by the type of receipt and by the way the item is reported for income tax purposes. This would be an appropriate time to remind enrollees that a three-digit enterprise code will be used by the FBMA computer program. They may wish to use the three digit codes for the enterprises. Example: 020 - corn, 301 - farrow to finish swine operation. Refer to the FBMA Input Form Manual provided through the FBMA state office.

a. Some general hints for recording receipts that are found on the record book section cover for receipts are as follows:

(1) At the start of the month, headings should be written in Columns 1-6 ("Crop Sales"), 15-17 ("Non-Breeding Livestock"), 18-20 ("Livestock Products"), 21-26 ("Other Farm Receipts"), 27-29 ("Breeding Livestock") and P10-P12 ("Other Non-Farm Income"). It will be easier if corn, as an example, is in Column 1 on all receipt forms.

(2) Enter the date the transaction took place in the "Date" Column on form 1. Enter the total received in the "Total Receipts" Column, plus a brief description in the "Description" Column.

(3) Enter the total again in the appropriate column (1-29) if a regular farm receipt. Also, enter quantity in the correct column.

(4) Money borrowed is entered in the "Total Receipts" Column and in Column 31 because it is money coming into the farm business. An entry should also be made on Forms 23 and 24.

(5) At the end of the month or the end of page, an accuracy check can be made by totaling Columns 1-P12--it should equal the total for the "Total Receipts" Column.

(6) If all entries for the month are on one page, transfer the total to the summary--Form 27. If more than one page is used, carry the totals forward to the top of the next Form 1, etc.

(7) Form 5 will also need to be completed for each entry that can be allocated to an enterprise. A description and amount as weight or bushels should be entered, plus the dollar amount.

(8) Some general hints on the receipts pages:

(a) A farmer who buys fertilizer for a rented farm and is paid by the landlord would enter the cost of fertilizer as an expense and the repaid amount in Column 13, "Resales and Settlements." It also needs to be credited to the specific crop enterprise on Form 5.

(b) Under "Breeding Livestock," "Qualify" means this sale qualifies for Capital Gains tax treatment.

(c) "Bought" and "Raised" Columns on both "Breeding Livestock" and "Non-Breeding Livestock" need to be completed so tax records may be completed accurately.

(d) Money transferred from the family living account or from non-farm income into the farm business account can be entered in P9 or P10 through P12, "Other Non-Farm Income."

(9) "Non-Farm and Personal Receipts," Form 6, may be taxable or non-taxable. Examples of non-taxable sources of money include transfers from savings accounts and transfers from separate family living accounts. In both cases taxes on the income had been paid previously. Usually, taxes have been deducted on non-farm wages, and the net amount is entered in the book. Examples of taxable sources may include interest and dividend income.

(10) Keep entries for the same transaction on the same line as it is distributed in the columns.

b. Distribute HO-3.1 for enrollees to make entries on their forms. Allow ample time for them to make the first entry. Then, using the Sample Entries for the Missouri Farm Business Record Book (Answer Key) and Forms 1 through 6, illustrate how to make the first entry. Complete the rest of the entries by allowing enrollees time to make an entry, then following with your example.

Examples of entries on receipt forms are as follows:

January 6--Borrowed $4,800 from Easy Bank for the purchase of a personal car.

January 9--Received $350 from John Olson for re-siding his barn.

January 11--Borrowed $17,000 from Easy Bank for purchase of truck and planter.

January 18--Received $172 as a patronage dividend from B & K Feeds.

January 30--Received $1,810 in non-farm wages from Columbia Public Schools.

2. ***How is an accuracy check for receipts completed?***

At the end of the month, each column (1-P12) is totaled. A check for accuracy is done by adding the total in each column. Next, the column totals should be added together and compared to the "Total Receipts" Column.

NOTE: Sum of columns 11, 12, 31, P1 and P8 equals $24,132, the total of the "Total Receipts" Column.

3. ***How are loan repayments, operating and capital expenditures recorded?***

Have enrollees turn to Forms 7, 8, 9, 10, 11 and 12 in the record book to use for practice. It should be noted that these forms are for recording expenditures (money going out of the business). Columns are grouped by the type of expense. As an example, Columns 32-47 are expenses that are deducted on income tax forms in the year incurred and that can usually be assigned to a specific enterprise. Columns 48-57 are expenses that are also deductible in the year incurred, but that usually cannot be assigned to a specific enterprise (these are usually called overhead expenses that are allocated to enterprises one time a year). Columns 58-59 are expenditures for items such as feeder pigs and feeder calves and are deducted on tax forms in the year in which the item is sold. Columns 60-63 are capital investments and are deducted in the form of depreciation (the amounts appearing in these columns should also be recorded on Forms 13, 15 and/or 17, and 19). Columns 64 and P13-P29 do not transfer to the summary page (Form 27) as a farm expense but represent money leaving the business.

a. Some general hints for recording expenditures that are found on the expenditure sheets:

(1) At the start of the month, headings should be written in Columns 35-57 and P13-P29 as needed. The same order should be followed for all 12 months. Headings on Form 11 should be inserted for enterprise accounting.

(2) Fnter the total expense in the "Total Cost" Column, plus a brief description in the "Description" Column.

(3) Enter the total in Columns 32-64 and P13-P29. Also, enter quantity when needed.

(4) Money paid on borrowed funds is entered in "Total Cost" Column, Form 7, and Column 64 because it is leaving the farm business. An entry should also be made on Form 23 or 24.

(5) Money taken out of the farm account for family living or for a non-farm investment is recorded in the "Total Cost" Column and Columns P13-P29.

(6) For enterprise accounting, those costs entered on Forms 7, 8 or 9 that are associated with an enterprise are also listed on Form 11 in the appropriate column with a description and amount.

(7) Some general hints--utility costs and other costs by the farm business and the family can be handled one of two ways: (1) enter the total in the "Utilities Farm Share" Column, Form 9, each month and at the end of the year, subtract the necessary percentage used by the family, or (2) enter the percentage used by the farm business on each month's expenses form and the remaining on Columns P24-P25.

(8) If dealer credit is used for the purchase of an item such as a tractor and repayment is over a period of time, the correct method of entering the transaction would be to list the total cost of the item on Forms 7 and 10, then record the amount owed as a loan on Forms 1 and 4.

(9) When items of machinery are purchased and an item is traded in, the "boot paid" is the amount entered on Forms 7 and 10 (not the list price).

(10) On capital items of machinery, purchased breeding livestock, etc., also enter the item on the depreciation schedule on Forms 13 and 15.

(11) At the end of the month or the end of the page, an accuracy check can be made by totaling Columns 32-64 and P13-P29--it should equal the total for the "Total Cost" Column.

(12) If all entries for the month are on one page, transfer the totals to the summary--Form 27. If more than one page is used during the month, carry totals to the next Form 7 and then to Form 27.

(13) Enterprise accounting of raised feed fed to livestock: if you need raised feed, once a month make an entry of the amount and kind of feed fed and the farm value on Form 11. The only entry on the other expense forms should be on Form 7 under "Date" and in the "Description" Column. No dollar amounts are entered on Forms 7-10.

b. Distribute HO-3.2 with sample entries for enrollees to complete on the forms. Allow ample time for them to make the first entry. Then, using the Sample Entries for the Missouri Farm Business Record Book (Answer Key) and Forms 7 through 12, illustrate how to make the first entry. Complete the rest of the entries by allowing enrollees time to make an entry, then following with the sample entry.

January 2--Paid West Trucking for hauling of market hogs. Check #701 for $167.

January 4--Paid Beaver's Child Care. Check #702 for $320.

January 4--Paid ABS for artificial breeding charge. Check #703 for $200. Services for cattle enterprise.

January 7--Monthly donation to First Baptist Church. Check #704 for $60.

January 9--Purchased seed beans from Brown Seed Company. Check #705 for $1,400.

January 9--Subscribed to farm consulting service and publication through American Farm Supply. Check #706 for $117.

January 9--Purchased used car from Melcher's Motors. Check #707 for $4,800. Car loan from Easy Bank on January 6 for $4,800.

January 10--Purchased groceries from Mel's Grocery. Check #708 for $210.

January 10--Dr. Small appointment. Check #709 for $43.

January 12--Purchased new 6-30" Planter for $12,000 and a used 1984 3/4-ton truck for $5,000. Check #710 for $17,000. Loan from Easy Bank on January 13.

January 13--Truck and planter payment to Easy Bank. Check #711 for $466 (Interest $170 - Principal $296).

January 14--Purchased supplies from Wilson Farm Center. Check #712 for $172.

January 14--Paid premium on insurance. Check #713 for $800.

January 16--Paid B & K Feeds monthly payment of $3,148 with check #714. Protein - 18,686 lbs. for $2,242, Creep Feed - 2,893 lbs. for $521, $300 for grinding, $85 storage (Enterprises: swine - feed/grinding $3,015, cattle - feed $48, and corn storage $85)

January 18--Paid General Telephone with check #715 for $72 ($42/Farm, $30/Home).

January 20--Paid County Water with check #716 for $32 ($24/Farm, $8/Home).

January 21--Paid County Electric with check #717 for $246 ($185/Farm, $61/Home).

January 21--Made car payment at Easy Bank with check #718 for $140 (Interest $40 Other (Itemized Deductions)/Amortized Payments $100).

January 24--Clothing at R & S Department Store check #719 for $156.

January 26--Purchased from Mel's Grocery with check #720 for $140.

January 28--Paid on credit card to Taylor Oil with check #721 for $320 for car gas and repairs.

January 28--Purchased TV from Jay's Appliance Center for $269 with check #722.

4. ***How is an accuracy check for expenditures completed?***

At the end of the month, each column (32-64 and P13-P29) is totaled. A check for accuracy is done by adding the total in each column. Next, the column totals should be added together, and the result should be compared to the "Total Expenditure" Column.

Refer to the previous sample forms for an accuracy check.

NOTE: Sum of Columns 32, 35, 36, 40, 42, 44, 46, 50, 51, 52, 54, 56, 62, 64, P13-P29 equals $30,278, the total of the "Total Costs" Column.

5. ***How are monthly totals transferred to the cash flow summary?***

Have enrollees turn to Form 27 in the record book to use for practice. It should be noted that line numbers on this form correspond with column numbers on Forms 1-10. Line numbers on Form 28 correspond with column numbers P13-P29 on Form 12.

The primary reason for using a cash summary is for the purpose of analyzing the year's cash flow and completing cash income taxes. The second and equally valuable use of these figures would be developing a cash flow for the following year.

Teaching procedures would entail allowing enrollees time to complete this form with values from Forms 1-10 and Form 12 previously completed. Assume the farmer had $7,000 in the bank at the beginning of the year; this value should be entered/noted at the side of Line L. Allow ample time for enrollees to complete their forms. Using the sample entries and Forms 27 and 28, illustrate how the entries should be made.

Additional entries:
(Line L-Cash Flow) $7,000 - Cash Balance as of Dec. 31st - previous year.

(Line M-Cash Flow) $198,267 - Credit Balance as of Dec. 31st - previous year.

**In the previous example, the farmer had $7,000 in the bank at the beginning of the year. This value was noted at the beginning of Line L. The entry on Line L (January) should be the same as the bank balance. At the end of the month, the cash balance is $854. If this does not agree with the checkbook, then there is either a math error or not all of the entries were made.*

F. Discussion

Sufficient time should be allotted for enrollees to ask questions and discuss other types of entries not illustrated. Many of them may want to make comparisons between the Missouri Farm Business Record Book and one that they have been using or are familiar with. Be sure that the discussion period enables farmers to be sure that they are knowledgeable of how to use the receipt, expenditure and cash flow summary forms.

G. Conclusions

Conclusions that may be reached include:

1. Receipt and expenditure sections are columnar entry format.
2. Flexibility is provided for enterprise records.
3. Capital expenditures are not enterprised because they are not easily identifiable unless the farming operation is highly specialized.
4. The record book is designed to agree with your checkbook.
5. The record book is a good place to begin planning.
6.

Announcements

Next meeting, we will be working with cash flow.

Social

Individual Instruction

When meeting with enrollees following this lesson, be sure that the receipts, expenditures and cash flow summary are current for this month. If records are not current, use your time in assisting in completing them. It is essential that the enrollee begins keeping records correctly. This would also be a good time to give individual instruction on how to use Form 28 (Non-Farm and Personal Cash Flow), Form 21 (Hired Labor Record), Form 22 (Independent Contractors), Form 23 (Intermediate and Long-Term Multipayment Note and Mortgage Record) and Form 24 (Credit Lines and Short-Term Notes) for those who will be needing them.

Materials Needed

Instructor

Missouri Farm Business Record Book
Sample Entries for the Missouri Farm Business Record Book (Answer Key)
FBMA Input Forms Manual (from the FBMA state office)

Student

HO-3.1	Sample Receipts
HO-3.2	Sample Expenditures
HO-3.3	Quiz--Receipts and Expenditures
HO-3.4	*Key for Quiz (HO-3.3)

Forms 1-6, 7-12, 27 and 28 in loose leaf form should be available to replace forms used to record practice entries.

SAMPLE RECEIPTS

January 6--Borrowed $4,800 from Easy Bank for the purchase of a personal car.

January 9--Received $350 from John Olson for re-siding his barn.

January 11--Borrowed $17,000 from Easy Bank for purchase of truck and planter.

January 18--Received $172 as a patronage dividend from B & K Feeds.

January 30--Received $1,810 in non-farm wages from Columbia Public Schools.

SAMPLE EXPENDITURES

January 2--Paid West Trucking for hauling of market hogs. Check #701 for $167.

January 4--Paid Beaver's Child Care. Check #702 for $320.

January 4--Paid ABS for artificial breeding charge. Check #703 for $200. Services for cattle enterprise.

January 7--Monthly donation to First Baptist Church. Check #704 for $60.

January 9--Purchased seed beans from Brown Seed Company. Check #705 for $1,400.

January 9--Subscribed to farm consulting service and publication through American Farm Supply. Check #706 for $117.

January 9--Purchased used car from Melcher's Motors. Check #707 for $4,800. Car loan from Easy Bank on January 6 for $4,800.

January 10--Purchased groceries from Mel's Grocery. Check #708 for $210.

January 10--Dr. Small appointment. Check #709 for $43.

January 12--Purchased new 6-30" Planter for $12,000 and a used 1984 3/4-ton truck for $5,000. Check #710 for $17,000. Loan from Easy Bank on January 13.

January 13--Truck and planter payment to Easy Bank. Check #711 for $466 (Interest $170 - Principal $296).

January 14--Purchased supplies from Wilson Farm Center. Check #712 for $172.

January 14--Paid premium on insurance. Check #713 for $800.

January 16--Paid B & K Feeds monthly payment of $3,148 with check #714. Protein - 18,686 lbs. for $2,242, Creep Feed - 2,893 lbs. for $521, $300 for grinding, $85 storage (Enterprises: swine - feed/grinding $3,015, cattle - feed $48, and corn storage $85)

January 18--Paid General Telephone with check #715 for $72 ($42/Farm, $30/Home).

January 20--Paid County Water with check #716 for $32 ($24/Farm, $8/Home).

January 21--Paid County Electric with check #717 for $246 ($185/Farm, $61/Home).

January 21--Made car payment at Easy Bank with check #718 for $140 (Interest $40 Other (Itemized Deductions)/Amortized Payments $100).

January 24--Clothing at R & S Department Store check #719 for $156.

January 26--Purchased from Mel's Grocery with check #720 for $140.

January 28--Paid on credit card to Taylor Oil with check #721 for $320 for car gas and repairs.

January 28--Purchased TV from Jay's Appliance Center for $269 with check #722.

QUIZ-RECEIPTS AND EXPENDITURES

Listed below are a number of receipts and expenditures. In the blank preceding the item, write the letter from the answer list indicating where the item would be entered in the record book.

___ 1. Hail insurance premium on soybeans
___ 2. Farm postage
___ 3. Income from custom combining
___ 4. Truck insurance premium
___ 5. Posts for fence repair
___ 6. Attorney's fee for abstract work
___ 7. Points and condensor for tractor
___ 8. Expense for hiring corn combined
___ 9. Enrollment for FBMA program
___ 10. Dirt fill purchased for new building
___ 11. Income from hail insurance on soybeans
___ 12. Tune up for truck
___ 13. Soybeans sold
___ 14. Interest on mortgage loan
___ 15. Oil for tractor
___ 16. Socket wrench set for farm
___ 17. Farm magazine subscription
___ 18. Insemination fee
___ 19. Hog wormer
___ 20. Sale of plow
___ 21. Lasso for soybeans
___ 22. Vitamin premix for livestock feed
___ 23. Window repair on barn
___ 24. Seed corn purchased
___ 25. Registration fees on livestock
___ 26. L.P. gas for crop drying
___ 27. Veterinary bill on livestock

Receipts

A Crop Sales
B Government Payments
C Custom Work
D Patronage Dividend, Refunds, Resales
E Cash Rent, Other
F Non-Breeding Livestock
G Livestock Products
H Breeding Livestock
I Machinery, Equipment and Building Sales
J Money Borrowed
K Non-Farm Receipts

Expenditures

L Feed
M Veterinary, Medicine
N Breeding Fees, Registration
O Fertilizer, Lime
P Crop Chemicals
Q Seeds, Crop Supplies
R Machinery Repair, Maintenance
S Building, Fence Repair
T Machinery, Truck Hire
U Cash Rent
V Power, Fuel, Oil, Grease
W Hired Labor
X Insurance
Y Taxes
Z Utilities
AA Truck Expense
BB Auto Expense
CC Miscellaneous
DD Interest
EE Non-Breeding Livestock
FF Breeding Stock
GG Machinery and Equipment
HH Land and Building Improvement
II Non-Farm Expense, Investment

___ 28. Anhydrous for corn
___ 29. Purchase of wheel for tractor
___ 30. Feeder pigs purchased
___ 31. Straw purchased for bedding
___ 32. Gravel for driveway
___ 33. Gasoline for farm
___ 34. Feeder steers sold
___ 35. Cash rent for land
___ 36. Trucking bill for hauling corn
___ 37. Storage payments for grain
___ 38. Sale of sows
___ 39. Repair of hog feeder
___ 40. Two tons of complete sow pellets
___ 41. Check for Mid-Am Milk Cooperative for milk sold
___ 42. Money from PCA loan
___ 43. Lime for pasture
___ 44. Twenty old cows sold
___ 45. Check from MFA Patronage Refund.

Receipts

A Crop Sales
B Government Payments
C Custom Work
D Patronage Dividend, Refunds, Resales
E Cash Rent, Other
F Non-Breeding Livestock
G Livestock Products
H Breeding Livestock
I Machinery, Equipment and Building Sales
J Money Borrowed
K Non-Farm Receipts

Expenditures

L Feed
M Veterinary, Medicine
N Breeding Fees, Registration
O Fertilizer, Lime
P Crop Chemicals
Q Seeds, Crop Supplies
R Machinery Repair, Maintenance
S Building, Fence Repair
T Machinery, Truck Hire
U Cash Rent
V Power, Fuel, Oil, Grease
W Hired Labor
X Insurance
Y Taxes
Z Utilities
AA Truck Expense
BB Auto Expense
CC Miscellaneous
DD Interest
EE Non-Breeding Livestock
FF Breeding Stock
GG Machinery and Equipment
HH Land and Building Improvement
II Non-Farm Expense, Investment

KEY FOR QUIZ (HO-3.3)

1. X--Insurance
2. CC--Miscellaneous
3. C--Custom Work
4. AA--Truck Expenses or X--Insurance
5. S--Building, Fence Repair
6. CC--Miscellaneous
7. R--Machinery Repair, Maintenance
8. T--Machinery, Truck Hire
9. CC--Miscellaneous
10. HH--Land and Building Improvement
11. A--Crop Sales
12. AA--Truck Expense
13. A--Crop Sales
14. DD--Interest
15. V--Power, Fuel, Oil & Grease
16. CC--Miscellaneous (could be GG--Machinery and Equipment depending on amount and tax situation of farmer)
17. CC--Miscellaneous
18. N--Breeding Fees, Registration
19. M--Veterinary, Medicine
20. I--Machinery, Equipment and Building Sales
21. P--Crop Chemicals
22. L--Feed
23. S--Building, Fence Repair
24. Q--Seeds, Crop Supplies
25. N--Breeding Fees, Registration
26. V--Power, Fuel, Oil, Grease
27. M--Veterinary, Medicine
28. O--Fertilizer, Lime

29. R--Machinery Repair, Maintenance (could be GG--Machinery and Equipment depending on amount and tax situation of farmer)
30. EE--Non-Breeding Livestock
31. CC--Miscellaneous
32. HH--Land and Building Improvements (could be Building and Fence Repair depending on amount and tax situation of farmer)
33. V--Power, Fuel, Oil, Grease
34. F--Non-Breeding Livestock
35. U--Cash Rent
36. T--Machinery, Truck Hire
37. U--Cash Rent
38. H--Breeding Livestock
39. R--Machinery Repair, Maintenance
40. L--Feed
41. G--Livestock Products
42. J--Money Borrowed
43. O--Fertilizer, Lime
44. H--Breeding Livestock (explain Qualify, Bot, Rcd)
45. D--Patronage Dividend, Refunds, Resales

FARM BUSINESS MANAGEMENT ANALYSIS

Unit I: Establishing a Farm Accounting System

Lesson 4: Planning the Year's Cash Flow

A. Review

The previous lesson, Recording Receipts and Expenditures, should be reviewed. List highlights on the board of conclusions and of key items that caused problems during individual instruction. Possible conclusions are listed below. Also, this is a good time to discuss problems enrollees had in recording their own receipts and expenditures.

1. Receipt and Expenditure entries are made two times--plus Forms 5 and 11 for enterprise items.

2. Expenditures on Forms 9 and 10 are generally not carried to Form 11 because it is difficult to assign them to an enterprise.

3. Weight and numbers of livestock sold and purchased need to be recorded.

4. An accuracy check should be made at the end of each month.

5. Totals for each column should be transferred to the same line number on Forms 27 and 28.

6. Line L on Form 27 should be compared with the checkbook balance/balances as an accuracy check.

7.

B. Objective

To determine estimated costs and returns for next year and plan next year's cash flow.

C. Motivation

Give a blank sheet of paper to everyone in class. Ask them to write down their estimate of average hog prices for next year (or a commodity common to everyone in the class). List some of the figures on the board and let people give their reasons for making their estimates. Do not try to arrive at a consensus at this point. Next, ask them which of two enterprises common

to the community (such as corn versus beans or beef cows versus backgrounding calves) will be the most profitable next year. Again, do not try to arrive at a consensus. Let them discuss reasons for opinions and then point out that the objective of our lesson is to determine the cost and returns we can use in planning a cash flow for next year.

D. Key Points

Key points that will be accomplished are as follows. (Use TM-4.2 to illustrate.)

1. *What are the reasons for a planned cash flow?*

2. *How do I develop costs and returns for various crops in our area for next year?*

3. *How do I develop costs and returns for livestock enterprises in our area for next year?*

4. *How do I develop a family living plan?*

5. *How are these estimates entered on Forms 27 and 28?*

6. *What are some additional returns?*

E. Introduction of Information

Begin by pointing out that the first part of the class will involve developing projected budgets for different crop and livestock enterprises. This will give us an idea of the relative profitability of enterprises for next year and an idea for projected costs and returns for our cash flow.

1. *What are the reasons for a planned cash flow?*

Use TM-4.1 with the following points to start discussion--let them add to the list or give examples.

a. Lets one know if, where, and how much credit will be needed. Someone said that in the short run, credit people are more interested in cash flows than profitability. They want to be sure they get their money back. And, for many farmers in 1990, an adequate cash flow meant the difference between staying in business or having to reduce or sell out. Credit people like a well-planned cash flow because it eliminates

"surprises" of the farmer needing an extra $10,000 after the credit person thought the loan was as large as it should be.

b. Lets a farmer "test" the year's plan on paper. If a plan won't show a profit or desired cash flow on paper, it probably won't in actual practice. Many times after doing a planned cash flow, it is obvious that some decisions need to be made: Should more beans and less corn be planted? Should pigs be sold as feeder pigs rather than fed out? Should prices be "locked-in" through a forward contract or by hedging?, etc.

c. Often results in lower interest rates and costs--better credit service. Some banks and farm credit services have lower interest rates for customers who do a good job of cash flow planning and who can arrange their credit needs well in advance of the time needed. (It saves the credit person's time and effort.) Also, because most farm loans charge interest only on unpaid balance, the total interest is often less with a planned cash flow because principal may be paid faster--even though it may be necessary to re-borrow in 30 or 60 days.

d. Lets a manager develop a sound financial plan--less impulse buying and selling. This may be one of the most profitable advantages of a cash flow plan.

e. Helps in tax planning. A cash flow can help "even" out income from year to year and result in lower taxes to be paid.

2. ***How do I develop costs and returns for various crops in our area for next year?***

Depending on the size of the class, divide them into groups of about 2-3 couples per group. Ask each group to work on a different crop budget to determine relative profitability of various crops.

Give enrollees sample budgets available in the Missouri Farm Financial Outlook and review the entries in the "Typical" Column. (These are updated yearly and a current copy should be obtained for enrollees.) Also, they should be given copies of projected prices developed by the UMC Agricultural Economic Outlook staff, the current FBMA Selected Summary Information (available from the FBMA state office), and their own analysis if it is available for reference. Ask them to develop their own figures for the "Your Estimate" Column within each group.

a. Some general hints for using the budget forms are:

(1) Let the small groups do budgets for an average situation in the community where the farmer owns all the land. Compare the results on various crops.

(2) Let the small groups do budgets with a typical community crop: share and/or cash lease arrangement. Include only the renter's share of expenses and returns in the "Your Estimate" Column. Compare these results.

(3) Determine the percent of crop yield that would need to be hedged or forward priced at today's futures prices to cover operating cost per acre. If this is in the 20-25 percent range, should this be considered?

b. Distribute copies of the budget forms to each family to let them plug in their own figures. As an example, some families may need two or three budget forms for corn because they may have different rental agreements or yield expectations. A limited amount of time can be allowed for this activity; however, most families will probably want to do most of this at home.

3. ***How do I develop costs and returns for livestock enterprises in our area for next year?***

Divide the class into groups as done for the crop section--only, try to group by interest or involvement in enterprises. Distribute appropriate budget forms. Also, distribute current outlook information developed by the UMC Agricultural Economic Outlook staff, as well as the FBMA Selected Summary Information and their own analysis for reference. Ask them to develop their own figures for the "Your Estimate" Column.

a. Some general hints for using the budget forms are:

(1) Encourage the group to do more than one budget per enterprise by changing factors such as litter size, litters per year per sow, amount of hay and pasture charged to a beef cow, etc. Compare the results of the various budgets on the board and discuss feasibility of each presented budget.

(2) Determine the effect of forward contracting or hedging 25-30 percent of the anticipated production at current opportunities for the next six months on covering cash operating costs. Discuss the feasibility of some in the group considering this in their cash flow planning.

4. ***How do I develop a family living plan?***

Estimating family living and "off farm" income and expenses:

a. Ask the class what they think family living costs are for a farm family of four.

b. Distribute HO-4.1 on estimating family living.

c. Relate to the class that family living is a major cost item, and that the cash flow must be planned accordingly.

d. Point out that the preferred way would be to maintain two different accounts (one for the farm business and one for family living).

e. Which ever way the family decides, they still need to keep accurate records of family living. The expenses and receipts forms will allow them to keep combined records of farm and family living.

f. Form 28 should be handed out and reviewed at this time. You may want to use the completed Form 28 from the Sample Entries for the Missouri Farm Business Record Book (Answer Key) to show how the form is completed. Because family living is very personal and varies widely, you will want to go over this part of the cash flow in generalities and leave specifics for the individualized instruction sessions.

5. ***How are these estimates entered on Forms 27 and 28?***

a. Planning crop and livestock programs. The crop and livestock budgets developed in Key Points 2 and 3 should provide the basis for enrollees making these decisions this year. Point out that next year, they will be able to use this year's summary.

b. Estimating repairs, overhead costs, and purchase/sale of capital items. Amounts from last year's cash flow summary plus inflation should provide a reasonably accurate projection for the coming year for these items.

c. Completing the cash flow and family living forms. Provide a copy of Forms 27 and 28 for each couple and have them start completing the forms for their situation for next year. Do not use enough class time for them to complete it in class. There will probably be several things the couples will want to discuss

privately prior to completing the form, and the individual instruction time this month is an opportune time to work individually on these.

d. Adjusting the tentative planned cash flow and family living plan. Review the procedure for identifying credit needs and repayments and methods of making adjustments to arrive at the planned cash flow and family living plan.

6. *What are some additional returns?*

Identify some items that may change this coming year that have not been discussed previously and that will have an effect on the planned cash flows. The following list is not meant to be complete, but may stimulate some ideas:

a. Discussion points

(1) ASCS target prices, loan rates, etc.

(2) Federal Crop Insurance Programs.

(3) ASCS cost share programs.

(4) Support price changes as for dairy.

(5) Interest rate changes.

(6) Other.

b. Encourage the group to consider these changes in their planned cash flows.

F. Discussion and Activity

Let the class discuss application of ideas developed throughout the lesson. If possible, have a local credit person meet with the group to share ideas on changes in budgets, importance of cash flow planning, and financing problems for the coming year.

G. Conclusions

Conclusions that may be reached include:

1. Budgets for crop and livestock enterprises should be developed annually.

2. This year's cash flow summary provides the base for planning next year's.

3. Budgets for owned and rented crop land should be developed separately.

4. Consideration might be given to some price protection as discussed in Key Points 2 and 3.

5.

Announcements

Social Activities

Individual Instruction

Materials Needed

Instructor

Missouri Farm Business Record Book
Sample Entries for the Missouri Farm Business Record Book (Answer Key)
Missouri Farm Financial Outlook
UMC Agricultural Economic Outlook staff's projected prices
FBMA Selected Summary Information (current year's copy)
TM-4.1 Reasons for a Cash Flow
TM-4.2 Steps in Planning a Cash Flow

Student

Projected Livestock Costs
Projected Crop Costs
HO-4.1 Estimated Family Living
Form 27 - Farm Business Cash Flow (completed)
Form 28 - Non-Farm & Personal Cash Flow (completed)
Missouri Farm Business Record Book
Individual FBMA analysis forms (if available)

REASONS FOR A CASH FLOW

A. Determine Credit Needs

B. "TEST" Ideas

C. Lower Credit Costs

D. Sound Financial Plan

E. Tax Planning

STEPS IN PLANNING A CASH FLOW

1. PLAN YOUR CROPPING AND LIVESTOCK PROGRAMS:

   A. Number of acres of each crop, cash expenses, and cash receipts

   B. Number of each livestock, cash expenses, and cash receipts

   C. Note month each of these will occur (use past year's records if possible).

2. ESTIMATE REPAIRS, OTHER OVERHEAD COSTS, ANY NEW INVESTMENTS, SALE OF A CAPITAL ITEM; DOLLARS FOR EACH; AND MONTH.

3. ESTIMATE FAMILY LIVING EXPENDITURES AND "OFF-FARM" INCOME.

4. COMPLETE CASH FLOW FORM INCLUDING NEEDED CREDIT.

5. MAKE ADJUSTMENTS AS DESIRED.

ESTIMATED FAMILY LIVING

(Family of four, operator's average age of 43)

Item	Average Expenses	Your Estimate
Cash Expenses for Living		
Food purchased	5,327.00	
Clothing and personal items	5,583.00	
Household operations	1,612.00	
Repairs, minor furnishings	599.00	
Health	4,447.00	
Recreation, vacation	1,858.00	
Education	1,616.00	
Giving	1,343.00	
Auto operating expenses	2,044.00	
Miscellaneous, child care	1,272.00	
Total cash living expense	**25,701.00**	
Investments for Living		
Home improvement	879.00	
Home furnishing, equipment	625.00	
Automobile purchase	639.00	
Total investments for living	**2,143.00**	
Life insurance	**1,913.00**	
Total cash expenditures	**29,757.00**	
Farm produce used	**128.00**	
Total used for living	**29,885.00**	

SOURCE: IOWA STATE UNIVERSITY-COOPERATIVE EXTENSION SERVICE

Note: This is only a sample guide; it does not include rent, home mortgage interest, or non-farm taxes.

FARM BUSINESS MANAGEMENT ANALYSIS

Unit I: Establishing a Farm Accounting System

Lesson 5: Developing Inventories of Machinery

A. Review

The previous lesson, Planning the Year's Cash Flow, should be reviewed. List all conclusions reached at your last meeting. Possible conclusions may have included:

1. Budgets for crop and livestock enterprises should be developed annually.

2. This year's cash flow summary provides the base for planning next year's.

3. Budgets for owned and rented crop land should be developed separately.

4. Consideration might be given to some price protection as discussed in Key Points 2 and 3, Lesson 4.

5.

B. Objective

To complete an inventory of machinery.

C. Motivation

1. An older farmer has updated his records in November and finds he has a very large income this year. He needs a new 4 x 4 pickup to feed with during the winter. The new pickup costs $18,000. After taking $10,000 expensing (Section 179) and depreciation of $300 (150% DDB - 4th quarter), he concludes the pickup will only cost him $13,020. He feels he needs the pickup and he will save $5,080 of taxes by purchasing it now. The $5,080 would come from a savings of 28% federal taxes, 6% state taxes, and 15.3% social security taxes and the $10,300 depreciation.

2. Administer the accompanying quiz, HO-5.2, as a motivating experience for enrollees.

D. Key Points

Key points that will be accomplished are as follows:

1. *What are some guidelines for completing depreciation forms for machinery?*

2. *How is a depreciation schedule for machinery recorded?*

E. Introduction of Information

Start the introduction of information by telling enrollees that the first part of the lesson will be a discussion of guidelines for depreciation. Then, time will be spent learning to make depreciation entries.

1. *What are some guidelines for completing depreciation forms for machinery?*

Depreciation is the decrease in value that occurs regardless of repair and maintenance. Good records are necessary for accurate income tax reporting.

a. Have enrollees turn to Forms 13 and 14 in their record books. Use the Sample Entries for the Missouri Farm Business Record Book (Answer Key) to explain the use of each column on the depreciation forms. Limit discussion in this part to highlights of following comments and clarify with examples in Key Point 2.

(1) Column 1--enter date purchased. Enter month and year, such as 5/91, so you know what percent of the first year's depreciation can be claimed.

(2) Column 2--provide enough description so you can identify the machine several years later.

(3) Column 3--enter "N" if the machine is new and "U" if used.

(4) Column 4--enter the "book value" or "undepreciated value" of a machine traded in. As an example, if you buy a new disc and trade in an old disc, determine the undepreciated value of the old disc and enter it in Column 4. Do not use the amount allowed by the dealer or the current market price of the old disc. Book value refers to the record book value.

(5) Column 5--enter the cash difference paid for the new machine. If a trade-in was included, it is the "boot" paid and is the same figure used on Forms 7 and 10--Column 62. Even if money is borrowed to pay this cash difference, enter the cash difference. Do not use figures such as "list price."

(6) Column 6--add Columns 4 and 5 to get this figure. If Column 4 is blank or -0-, then Column 6 is the same as Column 5. Note that the word used here is "basis." It is not necessarily what the machine is worth or its value to you, but it is the base from which you start depreciation.

(7) Column 7--enter the additional first year depreciation claimed. Generally, in years in which your income is higher than average, you would claim this additional depreciation. In years in which your income is below average, you probably would not claim it. The present expensing (Section 179) or adjustment amount is $10,000.

You may elect to expense up to $10,000 additional first year depreciation allowance on new or used tangible personal property that has a useful life of 5 years or more when purchased. Building, structures, and improvements on real property are not eligible for this special depreciation allowance. You may use this additional deduction only if you have a profit. The deduction cannot create a loss on your 1040 taxes.

Even though the property was not owned the full year, the maximum allowance for the additional first year depreciation may be taken. After taking this allowance, you may also take the regular depreciation to which you are entitled for the year, computed after adjusting the basis of the property for the first year allowance.

(8) Column 8--Blank.

(9) Column 9--to get the "Balance for Depreciation" figure, subtract Column 7 from Column 6 to get this figure ("Total Cost Basis" - "Expensing or Adjustments" = "Balance for Depreciation").

(10) Column 10--enter the estimated number of years you plan to keep this machine. A guide provided by the IRS follows:

Years Life	Description
3 years	Breeding hogs, over-the-road tractors
5 years	Cars, trucks, breeding cattle & sheep, computers, office equipment
7 years	Most machinery, ag fences, single purpose ag structures, grain bins
10 years	Barges and tugs
15 years	Orchards & vineyards, paved lots, drainage tile
20 years	Farm buildings
27.5 years	Residential rental
31.5 years	Non-residential real estate

(11) Column 11--use SL for Straight Line or MY for Mid-Year Convention. If you record your assets in separate accounts (on separate lines in the record book) in your record books, you may compute depreciation on the different assets by these methods. Note the following:

(a) Straight Line Method: Using this method, depreciation for each tax year is determined by dividing the adjusted basis of the property by the useful life as determined by the preceding table. Example: $5,000 pickup at 5 years life ($5,000 ÷ 5 yrs. = $1,000 per year depreciation).

Mid-Year Convention: Because most farmers rarely buy property at exactly the same time throughout the tax year, Congress established conventions for when depreciation on recovery property will commence. Most property falls under the half-year convention (other than real estate). Depreciation equal to one-half of the amount allowed for the full first year will be allowed.

(b) The second method of depreciation allowed to farmers is the 150% declining balance method. The following is a table of the depreciation rate (percent) allowed on property, using the 150% declining balance method for farm property:

Year of deprec.	Kind of property					
	3-year	5-year	7-year	10-year	15-year	20-year
1	25.00	15.00	10.71	7.50	5.00	3.750
2	37.50	25.50	19.13	13.88	9.50	7.219
3	25.00	17.85	15.03	11.79	8.55	6.677
4	12.50	16.66	12.25	10.02	7.70	6.177
5		16.66	12.25	8.74	6.93	5.713
6		8.33	12.25	8.74	6.23	5.285
7			12.25	8.74	5.90	4.888
8			6.13	8.74	5.90	4.522
9				8.74	5.91	4.462
10				8.74	5.90	4.461
11				4.37	5.91	4.462
12					5.90	4.461
13					5.91	4.462
14					5.90	4.461
15					5.91	4.462
16					2.95	4.461
17						4.462
18						4.461
19						4.462
20						4.461
21						2.231

(c) Note an exception to the midyear convention. If more than 40% of the farmer's non-real estate purchases are placed in service in the <u>last</u> quarter of the year, the farmer must use a mid-quarter convention. This convention deems that property is

placed in service at the midpoint of the quarter in which its use began. For example, under the mid-quarter convention, property placed in service in January would earn 3 1/2 quarters (that's 10 1/2 months) of depreciation for the year. Property placed in service in the last quarter would earn only one-half quarter (or 1 1/2) months of depreciation.

(d) Tips on using depreciation to your advantage:

1) Expensing (Section 179) is an added advantage for some farmers, but not all.

2) Keep accurate depreciation records. Many tax returns do not include depreciation on all items owned by a farmer because of errors and oversight.

3) Be consistent with the method of depreciation taken.

(e) TM-5.1 and TM-5.2 may be used to provide a final comparison of the straight line and mid year convention depreciation methods.

(12) Column 12--use only if an asset has been owned for one or more years prior to entering it in this record book. As an example, a farmer has been using a record system without a depreciation schedule and the tax preparer has typed a depreciation schedule each year. That farmer would determine the depreciation claimed on tax returns in prior years and enter that figure in Column 12. It is equal to the Original Cost Basis listed on the tax return minus the Remaining Undepreciated Value listed on the tax return. No figure is entered here for machines purchased after January 1 of the year in which this depreciation schedule is set up.

(13) Column 13--enter the difference between Column 6 and Column 12 (Column 6 - Column 12 = Column 13). No figure is entered here for machines purchased after January 1 of the year in which this depreciation schedule is set up.

(14) Column 14a--enter the depreciation claimed this year. If using the straight line method, it will be the annual amount. If using convention methods, check the tables pertaining to the purchases. When an item has been depreciated out (remaining book value), enter -0- here.

(15) Column 15a--enter the remaining book value or undepreciated amount. For items with an entry in Columns 12 and 13 (on hand prior to January 1 of year setting up this schedule), subtract Column 14a from Column 13 (Column 13 - Column 14a = Column 15a). For items purchased after January 1 of the year you set up this schedule, subtract Column 14a from Column 9 (Column 9 - Column 14a = Column 15a).

(16) Column 16--enter the current cash value of the assets at the start of the tax year. This may be higher than the remaining book value if purchased prior to January 1 of setup schedule.

(17) Column 17a--enter the current cash value of the assets at the end of the tax year. This may be higher than the remaining book value.

b. Hints on using Forms 13 and 14.

(1) When an item is no longer used, write the disposition on the line. As an example, write "traded in on new 4430 tractor" or "junked" or "depreciated out."

(2) Columns to the right on Forms 13 and 14, which are numbered 16 and 17, are not used for tax purposes. With inflation at the present rate, though, frequently the current market value of a machine is much higher than the remaining book value or undepreciated value. These columns can be used in order to keep financial statements on a more current basis, to be sure insurance is kept at an acceptable level, and to provide a more accurate picture of current investments in the farm business.

(3) Columns for five years depreciation are on Form 14. At the end of five years, secure another Form 14 and staple it to this one--leave Form 13 as originally completed with basic information.

(4) Farmers with more than 25 items to go on Forms 13 and 14 can add one page prior to the present Form 13--this will give a complete set again.

(5) One line can be left at the bottom of each year to total Expensing (Section 179). Then, items purchased in following years are entered on the next lines.

2. ***How is a depreciation schedule for machinery recorded?***

Distribute HO-5.1 to enrollees and allow enrollees ample time to make the first entry on Forms 13 and 14 in the record book. Next, illustrate how to make the first entry. Complete the rest of the entries by allowing class members time to make an entry, then following with your example. The first thirteen entries are prior purchases that are being transferred to this book in 1988. The last two are entries for 1988 that are the same type of purchase, but the last deals with a trade-in. Because of subsequent changes from the date of the original sample entries and computer depreciation, there may be discrepancies in the dates given, but the values are true for analysis purposes. Add two or three new purchases and illustrate the method and entry procedures.

The following are comments and explanations on each entry made to help clarify methods of recording depreciation. Use these and the filled out sample forms to aid in your discussion.

a. Entry 1--A new tractor purchased May 8, 1972, for $5,400. The book value of the trade-in was $3,100, giving a total cost basis and balance for depreciation of $8,500. Straight line method was used for 5 years with $8,500 prior depreciation taken. The remaining book value is -0-.

b. Entries 2-11--are similar entries with -0- remaining book value for the end of the year.

c. Entry 12--A new farrowing house purchased July 18, 1985, illustrates expensing of $5,000.

d. Entry 13--A new manure spreader purchased February 10, 1986, for $1,500. ACRS. method of depreciation was taken for 5 years, leaving -0- remaining book value for the end of 1990.

e. Entry 14--A new 6-30" planter was purchased January 12, 1988, for $12,000. Expensing of $10,000 was taken, leaving the remaining balance for depreciation at $2,000. Straight line

method of depreciation for 7 years was taken. The first year's depreciation is $143 ($2,000 ÷ 7 years ÷ 2 for the first year = $143) for 1988. For 1989 the depreciation is $286.

f. Entry 15--A used, 1984 3/4-ton truck purchased January 12, 1988, with the 1976 1/2-ton pickup traded in, for $5,000. Straight line method of depreciation for 5 years was taken. The first year's depreciation is $500 ($5,000 ÷ 5 years ÷ 2 for the first year = $500) for 1988. For 1989 the depreciation is $1,000.

g. Complete additional entries for current purchases.

F. Discussion

Sufficient time should be allotted for enrollees to ask questions and discuss other types of entries not illustrated. The discussion period should enable enrollees to be sure they are knowledgeable of how to use the forms for depreciation.

G. Conclusions

Conclusions that may be reached include:

1. A farmer in a high-income situation may want to claim expensing for additional first year depreciation and use the mid-year convention method for figuring the depreciation.

2. A farmer in a low-income situation may want to use the straight line method in order that more depreciation may be held for future years when the income will be higher.

3.

Announcements

Next meeting, we will be working with depreciation schedules for livestock and inventories.

Social

Individual Instruction

When meeting with enrollees following this lesson, be sure that the depreciation schedule for machinery is completed. If this is not complete, assist the farmer in entering all machinery on Forms 13 and 14. In many

cases, this will entail transferring figures from a different record book or from forms prepared by income tax practitioners.

This would be a good time to discuss the depreciable items that have been purchased or may be purchased during the current year and how they might be set up on the depreciation schedule. This is also a good opportunity to discuss any questions that the individual may have concerning this lesson on inventories of machinery.

Materials Needed

Instructor

Missouri Farm Business Record Book
Sample Entries For The Missouri Farm Business Record Book (Answer Key

TM-5.1	Methods of Depreciation by example
TM-5.2	Table of Alternative Methods of Depreciation

Student

HO-5.1	Determining Depreciation -- Practice Problems
HO-5.2	Quiz--Machinery Depreciation
HO-5.3	Key for Quiz (HO-5.2)

Missouri Farm Business Record Book

This example is based on a new tractor having an estimated useful life of 7 years, purchased on January 3 for $10,000. Expensing of $5,000 will be taken.

DEPRECIATION EXAMPLE		
YEAR	ANNUAL DEPRECIATION	
	Straight Line	Mid-Year Convention 150% Declining Balance
1st Year Depreciation	$357.15	$535.50
1st Year Expensing	$5,000.00	$5,000.00
Total Depreciation 1st Year	$5,357.15	$5,535.50
2nd Year	$714.29	$956.50
3rd Year	$714.29	$751.50
4th Year	$714.29	$612.50
5th Year	$714.29	$612.50
6th Year	$714.29	$612.50
7th Year	$714.29	$612.50
8th Year	$357.11	$306.50
TOTALS	$10,000.00	$10,000.00

EFFECT OF USING ALTERNATIVE METHODS OF DEPRECIATION

The following example assumes that the individual is in the 40% marginal tax bracket including federal, state, and social security taxes. The present value of the tax savings was based at a 12% discount rate. This example refers to the depreciation sample on TM-5.1, the purchase of a $10,000 tractor using the $5,000 expensing first year.

YEAR	STRAIGHT LINE			MID-YEAR CONVENTION 150% DECLINING BALANCE		
	Depreciation	Tax Saved	Present Value of Tax Savings	Depreciation	Tax Saved	Present Value of Tax Savings
1	$5,357.15	$2,142.86		$5,535.50	$2,214.20	
2	$714.29	$285.72		$956.50	$382.60	
3	$714.29	$285.72		$751.50	$300.60	
4	$714.29	$285.72		$612.50*	$245.00	
5	$714.29	$285.72		$612.50	$245.00	
6	$714.29	$285.72		$612.50	$245.00	
7	$714.29	$285.72		$612.50	$245.00	
8	$357.11	$142.84		$306.50	$122.60	
TOTAL	$10,000.00	$4,000.02		$10,000.00	$4,000.00	

*Changed to Straight Line Method.

NOTE--The comparisons shown here only take into consideration the present value of money based on the opportunity cost of lost interest. Inflation has the same basic effect in addition to the interest loss. As an example, if you take straight line depreciation on an acquisition, the first year's depreciation dollars are of equal value to the dollars of income they are offsetting. However, if you assume 10% inflation over a period of several years, the depreciation dollars stay the same while your income inflates. Therefore, the percent of income the depreciation can offset decreases each year.

SAMPLE ENTRIES

Instructions: Determine depreciation for the year of 1990.***

**We are assuming with these sample entries that the farmer transferred old depreciation items to a new depreciation form in 1988. Entries 1-13 are from prior years and entries 14 and 15 were purchased in 1988.*

1. Entry 1--A new tractor purchased May 8, 1972, for $5,400. The book value of the trade-in was $3,100, giving a total cost basis and balance for depreciation of $8,500. Straight line method was used for 5 years with $8,500 prior depreciation taken. The remaining book value is -0-.

2. Entries 2-11--are similar entries with -0- remaining book value for the end of the year.

3. Entry 12--A new farrowing house purchased July 18, 1985, illustrates expensing of $5,000.

4. Entry 13--A new manure spreader purchased February 10, 1986, for $1,500. Acrs. method of depreciation was taken for 5 years, leaving -0- remaining book value for the end of 1990.

5. Entry 14--A new 6-30" planter was purchased January 12, 1988, for $12,000.00. Expensing of $10,000 was taken, leaving the remaining balance for depreciation at $2,000. Straight line method of depreciation for 7 years was taken. The first year's depreciation is $143 ($2,000 ÷ 7 years ÷ 2 for the first year = $143) for 1988. For 1989 the depreciation is $286.

6. Entry 15--A used, 1984 3/4-ton truck purchased January 12, 1988, with the 1976 1/2-ton pickup traded in, for $5,000. Straight line method of depreciation for 5 years was taken. The first year's depreciation is $500 ($5,000 ÷ 5 years ÷ 2 for the first year = $500) for 1988. For 1989 the depreciation is $1,000.

*** 7. Complete additional entries for current purchases.

QUIZ--MACHINERY DEPRECIATION

___ 1. Ben Jones bought a new tractor on January 9 for $16,500. He is a young farmer and does not have a high income for the year. He would most likely use which method of depreciation?

a. straight line
b. 150% declining balance

___ 2. Susie Smith purchased an automatic hog waterer and installed it in July. The total cost of the waterer, water line, concrete, and electrical installation was $435. She could take expensing of __ on the total deal. The life of the system is estimated at 7 years.

a. $304.50
b. $435.00
c. $217.50
d. could not take expensing

___ 3. A farmer faced unusually high federal income taxes in 1990. To reduce the tax, a new tractor was purchased for $15,000 cash in September 1990, with an expected life of 7 years and no trade-in. For 1990, the farmer wants to minimize taxes and can:

a. take regular 150% one-half conversion.
b. take advantage of expensing
c. do a and c.

___ 4. A farmer plans to take expensing on a farm pickup with a total cost basis of $6,800. The life of the pickup is estimated at 5 years. The portion of the cost that will qualify for expensing will be:

a. 100%
b. 66 2/3%
c. 33 1/3%
d. 0%

___ 5. A farmer who needs a tax write-off to offset high income would use which method of depreciation?

a. straight line
b. 150% declining balance
c. a or b

___ 6. The expensing can be taken on:

a. farm pickup
b. tractor
c. disc
d. all of the above

___ 7. A farmer buys a used 16' disc on January 12 for $2,800. The life of the disc is estimated at 7 years, and straight line method with mid-year convention is used (no expensing). How much depreciation can be claimed in the first year?

a. $400.00
b. $100.00
c. $2800.00
d. $200.00
e. none of the above

___ 8. Assume the same situation as in question 8 except that the farmer elects to use the 150% declining balance method instead of straight line. How much depreciation can be claimed in the first year?

a. $210.00
b. $420.00
c. $840.00
d. $2800.00
e. none of the above

___ 9. A farmer trades corn planters on April 7. The list price for the new planter is $11,850 and the dealer allows $7,630 for the old planter. The farmer gives a check for the cash difference of $4,220. The book value of the old planter is $5,400. What will be the basis for figuring depreciation on the new planter?

a. $11,850.00
b. $4,220.00
c. $6,450.00
d. $9,620.00

KEY FOR QUIZ (HO-5.2)

1. a. straight line
2. b. $435
3. c. do a and b
4. a. 100%
5. b. 150% declining balance
6. d. all of the above
7. d. $200
8. b. $420
9. d. $9,620

FARM BUSINESS MANAGEMENT ANALYSIS

Unit I: Establishing a Farm Accounting System

Lesson 6: Developing Inventories of Livestock and of Crops and Supplies

A. Review

The previous lesson, Developing Depreciation Schedules for Machinery, should be reviewed. List all conclusions reached at your last meeting so that enrollees will be able to recall basic depreciation terminology and computations. Possible conclusions may have included:

1. A farmer in a high-income situation may want to take $10,000 expensing for additional first year depreciation and use the 150% declining balance method with a regular life for figuring the regular depreciation.

2. A farmer in a low-income situation may want to use the straight line method with alternative life in order that more depreciation may be held for future years when the income will be higher.

3.

B. Objective

To complete inventories of livestock and of crops and supplies.

C. Motivation

Ask the enrollees why a farmer who does not depreciate a herd of commercial cows keeps a depreciation schedule for livestock.

Reasons for keeping a depreciation schedule for a commercial livestock enterprise should be addressed by the enrollees. Reasons that might be found should include the importance of a record for inventory of purchased breeding livestock. If the herd was to be depreciated, the value of computing yearly depreciation is obvious.

Administer the accompanying quiz (HO-6.3) as a motivating experience for enrollees.

D. Key Points

Key points that will be accomplished are as follows:

1. *What are some guidelines for completing depreciation forms for livestock?*

2. *How do I record a depreciation schedule for livestock?*

3. *What are some guidelines for developing inventories?*

4. *How do I record inventories?*

E. Introduction of Information

Start the introduction of information by telling enrollees that the first part of the session will be spent on developing a depreciation schedule for livestock and that the latter part will be concerned with doing the inventory at the end of the year.

1. *What are some guidelines for completing depreciation forms for livestock?*

   Have enrollees turn to Forms 15 and 16 in their record books. Use the Sample Entries for the Missouri Farm Business Record Book (Answer Key) and Forms 15 and 16, as you explain the purpose of each column on the depreciation forms.

   The only livestock entered on these forms are purchased breeding animals. Do not enter raised breeding animals because their costs were deducted in the form of feed, etc., as they were raised. Also, do not enter purchased feeder livestock such as feeder pigs, feeder calves, etc., because they do not depreciate. Their costs are fully deductible when the animals are sold.

   a. Column 1--enter date purchased including month and year (5/91).

   b. Column 2--enter a description so that you can identify which group this refers to or enter an identification number for an individual animal or a lot number if available. Most commercial breeders would not use this column. Some registered breeders and/or dairy farmers who need to keep individual identification of animals may want to use this column.

   c. Column 3--enter number of head in the group or lot when acquired (purchased). If Column 2 is used and each animal is

listed separately, a "1" is entered in this column. Most farmers will enter the total head purchased at one time and use the "first in--first out" system of inventory on the depreciation schedule. This system assumes that the first animal that is sold (or that dies) came out of the first lot purchased. As an example, assume 30 head of breeding heifers were purchased 4/86 and 20 head of breeding heifers were purchased 5/88. Then on 3/90, three cows were culled and sold. Because it would be difficult to identify which group these were in, they would be taken out of the 4/86 group purchased and 27 head shown as remaining in that lot.

d. Column 4--note that Columns 4-9 are on a "Per Head Data." Column 4 is usually the purchase price per head. The only exception is if some other animals were "traded-in" on these animals. Refer to the explanation of Form 13--Column 5 on determining basis in that situation.

e. Column 5--Blank.

f. Column 6--enter the additional expensing claimed. Generally, in years in which your income is higher than average, you would claim this additional depreciation. In years in which your income is below average, you probably would not claim it. The present expensing (Section 179) or adjustment amount is $10,000. Refer to the explanation of Form 13--Column 7 for detailed information.

g. Column 7--enter the difference between Columns 4 and 6. (Column 4 - Column 6 = Column 7.)

h. Column 8--enter the estimated number of years you expect to keep the animals. A guide provided by the IRS follows:

Regular or Alternative Life

Years Life	Description
3 - 3 years	Breeding hogs
5 - 5 years	Breeding goats & sheep
5 - 7 years	Breeding cattle & dairy
7 - 10 years	Horses, breeding or work

i. Column 9--use SL for Straight Line or MY for Mid-Year convention. Most farmers will use the straight line on livestock because excess depreciation is recaptured when it is sold.

j. Column 10--enter depreciation allowed or allowable in prior years. This figure is obtained from a prior record book or income tax forms. It is on a per head basis.

k. Column 11--enter the difference between Column 7 and Column 10 (Column 7 - Column 10 = Column 11).

l. Column 12--enter the number on hand.

m. Column 13--(This Column and Column 14 are on a per lot basis.) Multiply Column 10 times Column 12. (Column 10 x Column 12 = Column 13.)

n. Column 14--multiply Column 11 times Column 12. (Column 11 x Column 12 = Column 14.)

The same procedure is used in future years for the respective prior year's ending columns.

o. Column 15a--(This Column and Column 16a are on a per head basis.) Note the numbering system on the Columns 15, etc., refers to the same information each year and A, etc., refers to the year.) Enter the depreciation allowed or allowable for this year. If using the straight line method, it will be the annual amount. If using convention methods, check the tables pertaining to the purchases. When an item has been depreciated out (remaining book value), enter -0- here.

p. Column 16a--enter the remaining book value or undepreciated amount. For items with an entry in Columns 13 and 14 (on hand prior to January 1 of year setting up this schedule), subtract Column 15a from Column 11 (Column 11 - Column 15a = Column 16a). For items purchased after January 1 of the year you set up this schedule, subtract Column 15a from Column 7 (Column 7 - Column 15a = Column 16a).

q. Column 17a--enter the number on hand.

r. Column 18a--(This column and column 19a are on a per lot basis.) Enter the depreciation allowed or allowable for this year. Multiply Column 17a by Column 15a. (Column 17a x Column 15a = Column 18a.)

s. Column 19a--enter the remaining book value or undepreciated amount. Subtract Column 18a from Column 14. (Column 14 - Column 18a = Column 19a.)

t. Columns 20-21f--These columns can be used in order to keep financial statements on a more current basis, to be sure insurance is kept at an acceptable level, and to provide a more accurate picture of current investments in the farm business.

2. ***How do I record a depreciation schedule for livestock?***

Distribute HO-6.1 to enrollees. Allow them ample time to make the first entry. Then, using the Sample Entries for the Missouri Farm Business Record Book (Answer Key) and Forms 15 and 16, illustrate how to make the first entry. Complete the rest of the entries by allowing enrollees time to make an entry, then following with your example. The first five entries are prior purchases that are being transferred to this book in 1988. The last two are entries for 1988 that are the same type of purchase, but different years life. Add two or three new purchases and illustrate the method and entry procedures.

The following are comments and explanations on each entry made to help clarify methods of recording depreciation. Use these and the sample entries to aid in your discussion.

a. Entry 1--April 18, 1984, 10 head of hereford cows were purchased for $310 @. ACRS. method of depreciation was used with a life of 5 years. At the start of 1988 there were still 10 head. At the end of 1988 there were 5 head left. Total depreciation had been taken. The remaining book value is -0-.

b. Entries 2-5--are similar entries with -0- remaining book value for the end of the year.

c. Entry 6--October 8, 1988, two boars were purchased for $260 @. Straight Line method of depreciation was used with a life of 3 years.

d. Entry 7--November 12, 1988, a bull was purchased for $680. Straight Line method of depreciation was used with a life of 5 years.

3. ***What are some guidelines for developing inventories?***

Have enrollees turn to Form 17 of the Missouri Farm Business Record Book and use the sample entries for discussion. Note the form is divided into open enterprises. Title the enterprises accordingly. Estimate values considering the following:

a. Breeding animals.

(1) Purchased breeding animals--value at cost less depreciation. When making entries on Form 17, note that on Line 1, the information comes from Forms 15 and 16. To determine the value of purchased breeding stock, the depreciable value is used. However, the weight is estimated by the farmer.

(2) Raised breeding animals--use a long-time average for each class. Line 2 is for raised breeding livestock. This value should remain constant for several years even though the market will fluctuate over time.

b. Non-Breeding animals.

(1) Note Line 5 refers to Purchased and Line 6 refers to Raised. Market animals are the value at current market price less cost of marketing.

Have enrollees turn to Form 18 in their record books for discussion. This form is fairly self-explanatory.

c. For feed, stored and growing crops, and crop and livestock supplies, use current market price less cost of marketing for raised crops. Purchased items are inventoried at cost delivered to the farm. Lines 15 and 16 are for growing crops. As an example, if wheat was sown in October, the "costs" in sowing the wheat would be entered here. Quantity refers to acres and price per unit to "costs per acre."

4. ***How do I record inventories?***

Distribute HO-6.2 (sample entries) to enrollees. Allow them time to record one or two entries on Form 17. Then, using the Sample Entries for the Missouri Farm Business Record Book (Answer Key) and Form 17, show how the entries are made. Complete and total the rest of the entries on Form 17 by allowing the enrollees to make entries, then discussing them. Use the same procedure for the examples on Form 18 from the record book.

F. Discussion

Sufficient time should be allotted for enrollees to ask questions and discuss problems associated with the types of entries they will be making. Be sure that they feel competent in completing Forms 15, 16, 17, and 18.

G. Conclusions

Conclusions that may be reached include:

1. Purchased breeding livestock should be entered on a depreciation schedule to assist in filing financial forms.

2. Inventories for breeding livestock are somewhat stable.

3. Values for completing inventories for non-breeding livestock will fluctuate with the market.

4. Values for purchased feeds, stored grain, etc., are current market values.

5.

Announcements

Next meeting, we will be working with investment records for real estate.

Social

Individual Instruction

When meeting with enrollees following this lesson, be sure that Forms 15, 16, 17, and 18 are completed. If they are not, assist the farmer in bringing them up-to-date. This would be an opportunity to spend some time helping the enrollee to understand the relationship of purchased and raised livestock as far as inventory, record keeping, and tax management are concerned. The enrollee needs to understand the "first-in first-out" method of depreciating purchased breeding stock and needs to decide whether to use this method or to keep track of individual animals or groups of animals. It should also be pointed out that purchased feeder livestock is deducted as an expense in the year in which it is sold. This would be a good time to help the enrollee understand how to keep track from one record year to the next of the purchased feeder livestock that have not yet been sold.

Materials Needed

Instructor

Missouri Farm Business Record Book
Sample Entries For The Missouri Farm Business Record Book (Answer Key)

Student

HO-6.1	Sample Entries For Forms 15 and 16
HO-6.2	Sample Entries For Forms 17 and 18
HO-6.3	Quiz--Livestock Depreciation and Inventories of Livestock and Crops
HO-6.4	Key for Quiz (HO-6.3)

Missouri Farm Business Record Book

SAMPLE ENTRIES FOR FORMS 15 and 16

1. Entry 1--April 18, 1984, 10 head of hereford cows were purchased for $310 @. ACRS. method of depreciation was used with a life of 5 years. At the start of 1988 there were still 10 head. At the end of 1988 there were 5 head left. Total depreciation had been taken. The remaining book value is -0-.

2. Entries 2-5--are similar entries with -0- remaining book value for the end of the year.

3. Entry 6--October 8, 1988, two boars were purchased for $260 @. Straight Line method of depreciation was used with a life of 3 years.

4. Entry 7--November 12, 1988, a bull was purchased for $680. Straight Line method of depreciation was used with a life of 5 years.

SAMPLE ENTRIES FOR FORMS 17 and 18

Items on hand as of January 1

1. all breeding stock listed on depreciation schedule (Form 15/16)
2. 150 non-breeding raised swine weighing 30 lbs. each at $24 each
3. 12,000 bushels of corn at $2.20/bushel
4. 85 (big round bales) of hay at $25/bale
5. 165 acres of growing wheat at $44/acre
6. 330 gallons of fuel at $.90/gallon
7. 10 gallons of oil at $5/gallon
8. 5 pounds of grease at $5/lb.
9. 500 (small square) bales of wheat straw at $1/bale

Items on hand as of December 31

1. all breeding stock listed on depreciation schedule (Form 15/16)
2. 30 head of raised gilts weighing 300 lbs. each at $150 each
3. 152 head of non-breeding swine weighing 30 lbs. each at $24 each
4. 3 head of raised heifers weighing 450 lbs. each at $300 each
5. 11,880 bushels of corn at $2.20/bushel
6. 30 (big round bales) of hay at $25/bale
7. 165 acres of growing wheat at $44/acre
8. 250 gallons of fuel at $.90/gallon
9. 4 gallons of oil at $5/gallon

10. 3 pounds of grease at $5/lb.

11. 450 (small square) bales of wheat straw at $1/bale

QUIZ--LIVESTOCK DEPRECIATION AND INVENTORIES OF LIVESTOCK AND CROPS

____ 1. A farmer purchased 25 bred heifers in March for $750 each. A five year life will be assumed for the heifers. An expensing of __ can be claimed if the operation has a large profit.

a. $18,750
b. $10,000
c. $8,750
d. heifers not eligible for the expensing

____ 2. In the above situation using Straight Line depreciation and with expensing taken the first year, depreciation per cow would be $35. True or False

____ 3. Assume the same information as in number 2. What would be the second year's depreciation per cow?

a. $70
b. $150
c. $75
d. $200

____ 4. Most people use the straight line method for depreciating breeding livestock because excess depreciation is recaptured when sold. True or False

____ 5. For the purpose of determining a value for inventory of purchased breeding animals, you would:

a. value at cost less depreciation taken in prior years
b. use a long-time average price for each class of livestock
c. value at current market price less cost of marketing
d. none of the above

____ 6. For raised breeding animals, you would:

a. value at cost less depreciation taken in prior years
b. use a long-time average price for each class of livestock
c. value at current market price less cost of marketing
d. none of the above

____ 7. For market animals, you would:

a. value at cost less depreciation taken in prior years
b. use a long-time average price for each class of livestock
c. value at current market price less cost of marketing
d. none of the above

____ 8. You should always use the highest possible price when determining inventory value of livestock and crops. True or False

KEY FOR QUIZ (HO-6.3)

1. b. $10,000
2. True
3. a. $70
4. True
5. a. value at cost less depreciation taken in prior years
6. b. use a long-time average price for each class of livestock
7. c. value at current market price less cost of marketing
8. False

FARM BUSINESS MANAGEMENT ANALYSIS

Unit I: Establishing a Farm Accounting System

Lesson 7: Developing an Investment Record for Real Estate

A. Review

The previous lesson, Developing Inventories of Livestock and of Crops and Supplies, should be reviewed. List all conclusions reached at your last meeting. Possible conclusions may have included:

1. Purchased breeding livestock should be entered on a depreciation schedule to assist in completing financial forms.

2. Values for completing inventories for breeding livestock are somewhat stable.

3. Values for completing inventories for non-breeding livestock will fluctuate with the market.

4. Values for purchased feeds, stored grain, etc., are current market values.

5.

B. Objective

To complete an investment record for real estate.

C. Motivation

1. Ask enrollees the problems that they or someone else they know has encountered when trying to sell real estate after ownership for a period of years. Attention should be focused on the basis paid for the real estate many years before. The importance of this is in the amount of capital gains that is paid.

2. Administer the accompanying quiz (HO-7.2) as a motivating experience for enrollees.

D. Key Points

Key points that will be accomplished are as follows:

1. *What are some guidelines for completing forms for an investment record for real estate?*

2. *How do I record depreciation schedules and investment records for real estate?*

E. Introduction of Information

Start the introduction of information by explaining to the enrollees that Forms 19 and 20 are basically divided into three sections: one for buildings and fences, one for land improvements, and one for land. Each part will be discussed separately.

1. *What are some guidelines for completing forms for an investment record for real estate?*

Although space is provided on each form for recording information on each farm, most farmers who buy an additional farm find it simpler to have one Form 19 for each farm.

Have enrollees turn to Form 19 in their record books. Use the Sample Entries for the Missouri Farm Business Record Book (Answer Key) and Form 19, to discuss the different areas on this form.

a. Lines 1-14--List on lines 1-14 such buildings as barns, machine sheds, grain bins, farrowing house, milk barn, or other items such as fences, etc. The owner's dwelling will be listed on line 17, but a house used for employees or rented out would be listed here.

(1) Column 3--enter total cost basis. When you assign a value to a fence that is already on a farm when purchased, include a labor charge with the cost of the fence.

(a) Value buildings that were in place when the farm was purchased at the insured value plus 20 percent. (Most insurance companies insure for 80 percent of the value.)

(b) Value items such as fences at cost less amount depreciated. For example, if a fence costs $900 per quarter mile to build, the farm has 2 1/2 miles of fence, and the fence has 50% of its life remaining, the value is $4,500 ($900 x 4 = $3,600 per mile x 2 1/2 miles x 50% life = $4,500).

(2) Column 4--enter expensing for first year purchases.

(3) Column 6--balance for depreciation is Column 3 minus Column 4. (Column 3 - Column 4 = Column 6)

(4) Column 7--years of expected life for the asset. The following is a table of life for buildings, etc.

Years Life	Description
7 years	Ag fences, single purpose ag structures, grain bins
10 years	Barges and tugs
15 years	Orchards & vineyards, paved lots, drainage tile
20 years	Farm buildings
27.5 years	Residential rental
31.5 years	Non-residential real estate

(5) Column 8--depreciation method taken.

(6) Column 9--use only if an asset has been owned for one or more years prior to entering it in this record book.

(7) Column 10--"Remaining Book Value at Year Start" is Column 6 minus Column 9. (Column 6 - Column 9 = Column 10.)

b. Line 15--The original cost of land is entered on line 15. As was mentioned above, separate forms for each farm should be completed. The original cost of land is determined by subtracting the value of buildings, fences, and land improvements from the total cost of the farm. For example, if a farmer buys a farm for $200,000 and determines the value of depreciable buildings to be $33,000, the value of depreciable land improvements to be $3,000, and the value of the owner's dwelling to be $32,000, the land value would be $132,000 ($200,000 - $68,000). Because land is not depreciable, the book value will remain constant.

c. Line 16--List on line 16 such land improvements as soil and water conservation expense, land clearing, and such depreciable items as tilling of land, installing a watering system, etc.

(1) Soil and water conservation expenses include such things as the leveling, grading, and terracing of land; and the construction, control and protection of diversion channels, drainage ditches, earthen dams, watercourses, outlets and ponds. In general, soil and water conservation expenses may be treated as current deductible expenses up to 25% of the gross income from farming in any year. These improvements need to be listed on Form 19 even though they are not depreciated in order to keep a record of them, because if the farm is sold in less than 10 years, all or part of the deduction of these expenses will be recaptured.

(2) Items such as tilling of land, installation of a water system, pipe used in a pond, etc., are listed as land improvements and are to be depreciated. They would be depreciated in the same manner as buildings.

d. Line 17--The value of the owner's dwelling is determined and entered on line 17.

2. ***How do I record depreciation schedules and investment records for real estate?***

Distribute HO-7.1 to enrollees and let them read the examples. Have them do the examples on their forms. Then discuss them using the Sample Entries for the Missouri Farm Business Record Book (Answer Key) and Forms 19 and 20. The following are the figures and explanations on each entry to help clarify how they are done. Use these and the completed sample entries to aid in your discussion.

a. Entry 1. The main farm consisting of 750 acres was acquired on March 17, 1975. The legal description is "East 1/2, Southeast 1/4 of Section 20, Section 21 and West 1/2 and Northeast 1/4, Northwest 1/4, Northwest 1/4 of Section 22 all in Township 35 North, Range 15 West 5th Principal Meridian."

b. Line 1: Barn established on farm valued for basis at $8,000. Straight line method of depreciation used for 20 years.

c. Line 2: Hay Shed established on farm valued for basis at $5,000. Straight line method of depreciation used for 20 years.

d. Line 3: Fences established on farm valued for basis at $4,000. Straight line method of depreciation used for 7 years.

e. Line 4: Equipment Shed built July 16, 1981, for $14,000. ACRS method of depreciation used for 15 years.

f. Line 5: Hay Shed built May 21, 1983, for $7,500. ACRS method of depreciation used for 15 years.

g. Line 6: Livestock and Hay Storage Barn built November 21, 1986, for $20,000. Straight line method of depreciation used for 19 years.

h. Line 15: Land valued at $522,600.

i. Line 17: Home (dwelling) on farm valued at $18,000.

j. Line (a): Original Basis Allocated To Land. Entry Line 15 Form 19 here.

k. Line (b): Settlement fees (undeducted) $100.

l. Line (c): Total Original Basis is Line (a) and Line (b). {Line (a) + Line (b) = Line (c)}

m. Line (d): Enter an appraised value at purchase.

n. Line (e): Timber on farm estimated value of $2,000. (If timber was not appraised at time of purchase, an appraisal can be done by contacting the State Forestry.)

o. Line (f): Portion of basis allocated to dwelling. Enter Line 17 from Form 19 here.

p. Line (g): Original Basis Allocated To Land is the total original basis (c) minus basis allocated to buildings and improvements (d) minus basis allocated to timber (e) minus basis allocated to dwelling (f). {Line (c) - Line (d) - Line (e) - Line (f) = Line (g)}

The "Estimated Current Market Value" portion of Form 20 should be a conservative figure; however, it needs to reflect the effect of inflation.

F. Discussion

Ample time should be allotted for enrollees to discuss problems associated with the types of entries they will be making. They should be competent in completing Forms 19 and 20 for all land purchased recently.

G. Conclusions

Conclusions that may be reached include:

1. Each farm should be set up on separate Forms 19 and 20.

2. All existing assets that are eligible should be set up for depreciation.

3. Forms 19 and 20 should be kept in the record book on each piece of real estate until it is sold.

4.

Announcements

Next meeting, we will be working with keeping enterprise records.

Social

Individual Instruction

When meeting with enrollees following this lesson, assist them in getting their Forms 19 and 20 completed. You should remind them that part of the purpose of Forms 19 and 20 is to keep a permanent record of real estate purchases and current value. This record will be needed for income tax and estate tax settlement when a farm is sold. A farmer who does not have adequate records of the original real estate transactions will be at a disadvantage. If a farmer needs to enter a farm that has been owned for a number of years but has no previous records, you need to help them get the farm entered on Forms 19 and 20. The remaining value of buildings, fences and land improvements can usually be found on previous tax records, etc. The farmer will usually remember what was paid for the farm.

Materials Needed

Instructor

Sample Entries For The Missouri Farm Business Record Book (Answer Key)
Missouri Farm Business Record Book

Student

HO-7.1	Sample Entries For Forms 19 and 20
HO-7.2	Quiz--Real Estate Depreciation, Investment Record
HO-7.3	Key for Quiz (HO-7.2)

Missouri Farm Business Record Book

SAMPLE ENTRIES FOR FORMS 19 and 20

1. The main farm consisting of 750 acres was acquired on March 17, 1975. The legal description is "East 1/2, Southeast 1/4 of Section 20, Section 21 and West 1/2 and Northeast 1/4, Northwest 1/4, Northwest 1/4 of Section 22 all in Township 35 North, Range 15 West 5th Principal Meridian."

2. Barn established on farm valued for basis at $8,000. Straight line method of depreciation used for 20 years.

3. Hay Shed established on farm valued for basis at $5,000. Straight line method of depreciation used for 20 years.

4. Fences established on farm valued for basis at $4,000. Straight line method of depreciation used for 7 years.

5. Equipment Shed built July 16, 1981, for $14,000. ACRS method of depreciation used for 15 years.

6. Hay Shed built May 21, 1983, for $7,500. ACRS method of depreciation used for 15 years.

7. Livestock and Hay Storage Barn built November 21, 1986, for $20,000. Straight line method of depreciation used for 19 years.

8. Land valued at $522,600.

9. Home (dwelling) on farm valued at $18,000.

10. Settlement fees (undeducted) $100.

11. Timber on farm estimated value of $2,000.

QUIZ ON REAL ESTATE DEPRECIATION AND INVESTMENT RECORD

___ 1. Land is a depreciable asset. True or False

___ 2. Existing fences on a recently purchased farm are eligible for expensing. True or False

___ 3. A machine shed can be depreciated. True or False

___ 4. A machine shed qualifies for expensing. True or False

___ 5. A milking barn can be depreciated. True or False

___ 6. A milking barn qualifies for expensing. True or False

___ 7. Generally, the cost of a pond can be deducted as an ordinary expense in the year built. True or False

___ 8. The clearing of land is a depreciable item. True or False

___ 9. The 150% declining balance method of depreciation is accepted on new and used buildings. True or False

___10. The owner's dwelling should be depreciated along with the rest of the farm buildings. True or False

KEY TO QUIZ (HO-7.2)

1. False
2. True
3. True
4. False
5. True
6. True
7. False
8. True
9. True
10. False

FARM BUSINESS MANAGEMENT ANALYSIS

Unit I: Establishing a Farm Accounting System

Lesson 8: Keeping Enterprise Records

A. Review

The previous lesson, Developing an Investment Record for Real Estate, should be reviewed. List all conclusions reached at your last meeting so that the enrollees will be able to recall how the real estate depreciation schedule and inventory are set up. Possible conclusions may have included:

1. Each farm should be set up on separate Forms 19 and 20.

2. All existing assets that are eligible should be set up for depreciation.

3. Forms 19 and 20 should be kept in the record book on each piece of real estate until it is sold.

4.

B. Objective

To establish and maintain accurate, complete enterprise records.

C. Motivation

Traditionally, farm records have been used primarily at the end of the year for figuring income tax. Presently, however, emphasis is being placed on maintaining detailed records of each enterprise that is analyzed to indicate business progress. Use the quiz on HO-8.13 (answer key on HO-8.14) to emphasize possible use of such records.

Enterprise records are valuable in two ways. First, they are necessary for determining how profitable each enterprise has been and which enterprises are really supporting the farm business. Secondly, with good enterprise records, a farmer can check efficiency and production factors within each farm enterprise. Enterprise records are essential for an inside analysis of the farm business.

One example that may be used to emphasize the importance of enterprise records concerns a diversified farmer who had a typical operation: beef cow/calf herd, row crops and hogs. After enterprise data were recorded and then analyzed by the computer, it was realized that the best returns were

coming from the hog enterprise. Furthermore, success in raising hogs was superior to all other enterprises. Thus, income has been increased substantially by expanding the hog enterprise and centering the rest of the operation around it.

D. Key Points

Key points that will be accomplished are as follows:

1. *How do I separate the various enterprises for an enterprise record and analysis?*

2. *What are some guidelines for completing the livestock enterprise data forms?*

3. *How do I record livestock enterprise data on Forms 30, 34, 36, and 37?*

4. *What are some guidelines for completing the crop enterprise data forms?*

5. *How do I record forage crop and grain crop enterprises on Forms 32 and 33?*

6. *How do I record entries for Form 31, Annual Enterprise Expense Allocation?*

E. Introduction of Information

Start the introduction of information by pointing out that there are many different ways of breaking down a farm business for enterprise analysis and that a farmer must make the decision on how this will be done in order to be able to keep enterprise records correctly. After establishing the enterprise breakdown, we will be able to develop a system of recording livestock, grain and forage crop data on a monthly basis that can be easily summarized at the end of the year.

1. *How do I separate the various enterprises for an enterprise record and analysis?*

Start the discussion by using an enrollee's farming operation (preferably, a diverse operation) as an example farm and asking the group how they would separate the enterprises for analysis. List the enterprises on the board. Use the following points in your discussion.

a. The enterprise analyses can be as detailed as the farmer wants them to be. Each individual can decide which analysis to use.

b. Basically, most farmers will want to divide their operation into each major enterprise (i.e., all hogs, all cattle, corn, wheat, alfalfa, etc.) and keep track of their expenses, receipts, yields, etc., on each enterprise. However, if hogs supply a major portion of the income to the farmer, the farmer may want to divide the hog enterprise into subdivisions. For example, the farmer may be interested in the farrowing to weaning phase as compared to the finishing phase of the hog enterprise. Or, if a farmer finishes a lot of hogs, it might be an advantage to keep track of separate groups of hogs in order to compare feed efficiencies, rates of gain, etc., between raised and purchased feeder pigs. A farmer could also compare different kinds of feed and feed rations with a more detailed enterprise breakdown. A general suggestion might be that a farmer limit the number of livestock enterprises to be analyzed to two the first year and expand this number after gaining experience.

   Crops can also be handled in several ways. A farmer may elect to analyze all corn together; however, if desired, a comparison could be made between corn grown on different farms, or on different types of soil, to better be able to fertilize and select weed control for each type. All crop enterprises can be analyzed the first year.

c. More enterprises and enterprise subdivisions mean more record keeping and work, but the effort will be offset with a more thorough farm analysis.

2. ***What are some guidelines for completing the livestock enterprise data forms?***

   a. Have enrollees turn to Form 30 in their record books. It should be pointed out that much of the information for Form 30 will come directly from Form 11 in the expenditures section. Both forms should be completed monthly. A separate Form 30 must be kept for each livestock enterprise or enterprise subdivision that is to be analyzed.

      Next, use the sample Form 30 on HO-8.1 to explain each section of the form and how it is to be filled out.

(1) Columns 1-6--enter each month the amount and dollar value of purchased protein. These figures will have to be separated out on Form 11.

(2) Columns 7-12--enter each month the bushel and dollar value of corn or other grain fed. Be sure you have included all raised grain that has been fed in addition to the purchased grain. A farmer that mixes protein and grain together at the elevator can list it as a total under "Purchased Feed (protein, pre-mix, etc.)."

(3) Columns 13-16--enter tons and dollar value of hay and silage fed. In most cases, one time per year is frequent enough for this. Silage fed all cattle is determined by adding beginning inventory, production and sales, and then subtracting the quantity obtained by the difference between the closing inventory and sales. (Silage fed all cattle = beginning inventory plus production plus sales minus closing inventory minus sales.)

(4) Column 17--enter total number of pasture days used during the month. One pasture day is defined as the amount of pasture required for a 1,000# cow per day. For example, a herd of twenty 500# yearling cattle would require 300 pasture days in a month. This might also be calculated one time per year if about the same number of livestock are on hand each month.

(5) Column 18--enter number of females of breeding age in the herd.

(6) Column 19--enter number of litters farrowed.

(7) Column 20--enter number of pigs born.

(8) Column 21--enter number of pigs weaned. Most farmers will have a "barn" record or pocket notebook to facilitate collection of this information.

(9) Column 22--enter average number of cows, ewes, mares, etc. of breeding age in the herd.

(10) Column 23--enter number of individual animals born.

(11) Column 24--enter number of animals weaned.

(12) Column 25-27--enter production information on dairy. Also in lower right corner enter production information on poultry.

b. Hints for using Form 30.

(1) If Form 11 is completed monthly as shown in Lesson 3, keeping Form 30 up-to-date should be a simple procedure.

(2) A farmer will need to keep track of breeding and performance information in order to complete Columns 18-27. Each individual situation will require a different method for doing this.

(3) Remember, when feed is purchased in one calendar year, but not fed until the next calendar year, the value will be recorded in the year it was fed.

(4) Pasture days are calculated as follows:

Pasture days = (pounds per animal x number of head) ÷ 1,000 x number of days.

For example (using the figures from HO-8.11):

30 cows x 1,000 pounds = 30,000
28 calves x 250 pounds = 7,000
1 bull x 1,500 pounds = 1,500
Total pounds of beef = 38,500

38,500 ÷ 1,000 = 38.5 pasture days needed

38.5 x 31 days in July = 1,194 total pasture days for July

3. ***How do I record livestock enterprise data on Forms 30, 34, 36, and 37?***

a. Distribute HO-8.11 to the enrollees and ask them to read through the sample beef cattle enterprise situation. Give them some time and then have them go ahead and start making entries on Form 30. As they work through the sample entries, stop them occasionally and talk about problems they may have. There will likely be some questions. Use the guidelines and the completed sample of Form 30 on HO-8.4 to aid in your discussion. You may want to have enrollees compare the handouts with their own Form 30(s) when they are through.

The same procedure could be used with a sample finishing hog operation. You may want to create such an example, using the information from the sample Form 30 on HO-8.1.

b. At this point you should spend some time discussing the livestock enterprises of some of the enrollees and some of the problems they may encounter in keeping an accurate enterprise record.

c. Have enrollees turn to Form 34, "Livestock Purchased for Resale," in their record books. Use the sample Form 34 on HO-8.5 as you discuss each section.

(1) Form 34 information comes from expenditure Form 10. Form 34 should be carried over from year to year, as purchased livestock for resale may not be sold in the same year.

(2) Some information for Form 34 ("Death Loss") can also come from Form 30.

d. Have enrollees turn to Forms 36 and 37, "Monthly Livestock Inventory Record" and "Monthly Feed and Grain Inventory Record," in their record books.

(1) Use the sample Forms 36 and 37 on HO-8.6 and HO-8.7 to discuss each section of the forms. Below are comments and explanations that will help in your discussion.

(2) Form 36 is an inventory of livestock enterprises. Note the column for livestock consumed. Most of this information relates back to Form 30, "Livestock Enterprise Data."

(3) Form 37 is an inventory of the monthly feed and grain. Most of this information relates back to Form 30, "Livestock Enterprise Data."

(4) Forms 36 and 37 are fairly self explanatory.

4. ***What are some guidelines for completing the crop enterprise data forms?***

a. Have enrollees turn to Forms 32 and 33, "Field Record," in their record books. Point out that the information for

completing Forms 32 and 33 comes from Form 11 and from field records.

Next, use the sample Forms 32 and 33 on HO-8.8 and HO-8.9 to explain each section of the forms. Below are explanations that may be helpful in your discussion.

(1) Columns 1-2--write in field number or some field identification. This is only for helping sort crops. Extra lines are provided for several crops. This allows the entry to be separated according to owned and rented portions of the enterprise.

(2) Column 3--insert total acres of each crop.

(3) Column 4--insert name of crop.

(4) Column 5--insert tillage time (check notation at bottom of form).

(5) Columns 6-8--insert information relating to seed (planting date, variety used, and rate/acre). Remember to include the number of bushels of home grown seed used on that crop.

(6) Columns 9-14--insert fertilizer expenses for each crop - date applied, application method, and pounds applied/acre.

(7) Columns 15-17--insert lime expenses for each crop - date applied, tons/acres, and test.

(8) Columns 18-29--insert herbicide expenses for each crop - date, kind, method, and rate/acre.

(9) Columns 30-32--insert pesticide expenses for each crop - date, kind, and rate/acre.

(10) Columns 33-35--insert harvest information - date, yield/acre, and percent moisture.

(11) Column 36--insert any notations concerning special conditions, rainfall, irrigation, etc.

b. Hints in completing Forms 32 and 33.

(1) These forms may be completed at the end of the year; however, it is probably more accurate to record the information in the month it occurs.

(2) The total lines are all that are necessary for enterprise analysis. The various crops do not have to be broken down into separate fields if it is easier to add all of them together.

(3) If it is desired to have a separate analysis of a crop (e.g., corn on one farm as compared to corn on another farm), a separate line cn Forms 32 and 33 should be completed for each acreage of the crop from which an analysis is desired. A note of this should be made to the left of the line number.

(4) If expenses for a 1993 crop were incurred in 1992 (e.g., seed and fertilizer on winter wheat), they must be shown on Form 31 in 1993 so that a correct crop analysis is made. Likewise, expenses incurred during 1993 for a 1994 crop will be shown on Forms 32 and 33 in 1994.

5. ***How do I record forage crop and grain crop enterprise data on Forms 32 and 33?***

a. Distribute HO-8.12 to the enrollees and ask them to read through the sample crop farm situation. Have them go ahead and make the entries for fields. Then, discuss how the entries should be made. Let them do the rest of the entries and complete both Forms 32 and 33. There will be questions and discussion along the way. When some of them are done, discuss the completed forms with the help of the completed sample forms on HO-8.8 and HO-8.9. You may want to make a handout of the completed samples to give to the enrollees to compare with their own.

b. At this point, you should spend some time discussing the crop enterprises of some of the enrollees and some particular problems they may encounter in keeping accurate enterprise records.

6. ***How do I record entries for Form 31, "Annual Enterprise Expense Allocation?"***

Use the sample Form 31 on HO-8.10 to explain each section of the form. Information for this form is found in several areas as follows:

a. Lines 1 through 26 are transferred directly from the expenditures (pink) section, Forms 7, 8, 9, and 10.

b. Line 27, "Feed Raised," is found on Form 37.

c. Line 28, "Value of Unpaid Labor," is found by allocating to each enterprise a percent of Form 29, lines 20 and 21.

d. Line 29, "Livestock Depreciation," is found on Forms 15 and 16

e. Line 30, "Machinery Depreciation," is found on Forms 13 and 14.

f. Line 31, "Building Depreciation," is found on Forms 19 and 20.

g. Enter on line 32 the cost of inputs (fertilizer, seed) applied to rented acres for which you did not receive returns.

h. Line 33, "Livestock Purchased for Resale," is found on Form 34 or 35.

F. Discussion

Spend sufficient time in general discussion of keeping and analyzing enterprise records. Have the group discuss how they can get a personal system going for keeping meaningful enterprise records. Point out that records analysis at the end of the year will be much easier if enterprise records are kept up-to-date monthly. Each farmer first has to decide which enterprises to keep separate and then get a system worked out for keeping the records accurate.

G. Conclusions

Conclusions that may be reached include:

1. Enterprise records are necessary in determining how profitable each enterprise has been and which enterprises are really supporting the farm business.

2. A farmer's operation can be split into as many enterprises as desired for an analysis.

3. The "livestock enterprise data" form (Form 30) must be kept up-to-date monthly.

4. A separate Form 30 will be kept for each livestock enterprise to be analyzed.

5. All grain crop and forage crop records are kept on Forms 32 and 33.

6. All monthly inventories of feed, livestock, and livestock purchased for resale are kept on Forms 34, 36, and 37.

7.

Announcements

Next meeting, we will be working with farm support records.

Social

Individual Instruction

When meeting with the enrollees following this lesson, discuss with the enrollees their plans for enterprise analysis. Help them get a good procedure started for keeping enterprise records that will provide accurate figures for analysis at the end of the year. It is important that you discuss with the enrollees how their figures will be transferred from Forms 7 through 11 to Forms 30, 31, 32, 33, 34, 36, and 37. For the first several months after they have started keeping their enterprise records, you will need to check over them carefully and make sure they are done correctly.

If an enrollee does not have a system for keeping field records, assistance should be provided for developing a farm map and initiating the use of Forms 32 and 33.

Materials Needed

Instructor

Missouri Farm Business Record Book

Student

HO-8.1	Form 30, Livestock Enterprise Data (swine 301)
HO-8.2	Form 30, Livestock Enterprise Data (cattle 321)
HO-8.3	Form 30, Livestock Enterprise Data (cattle 324)
HO-8.4	Form 30, Livestock Enterprise Data (answer key

	for HO-8.11)
HO-8.5	Form 34, Livestock Purchased For Resale (cattle)
HO-8.6	Form 36, Monthly Livestock Inventory Record (swine 301)
HO-8.7	Form 37, Monthly Feed And Grain Inventory Record (corn 020)
HO-8.8	Form 32, Field Record
HO-8.9	Form 33, Field Record Cont.
HO-8.10	Form 31, Annual Enterprise Expense Allocation
HO-8.11	Sample Farm entries for Form 30, Livestock Enterprise Data
HO-8.12	Sample Farm entries for Forms 32 and 33, Field Record
HO-8.13	Quiz--Enterprise Records
HO-8.14	Key for Quiz (HO-8.3)

Missouri Farm Business Record Book

19 ___ **LIVESTOCK ENTERPRISE DATA** **Enterprise:** SWINE 301 **FORM 30**

	PURCHASED FEED (protein, pre-mix, etc.)						GRAINS						ROUGHAGE					
	PROT		CREEP				Corn											
	Quantity	$	Quantity	$	Quantity	$	Bushel	$	Bushel	$	Bushel	$	Tons	$	Tons	$	Pasture Days	
JAN.	18286	3194	2893	521			1280	3816										JAN.
FEB.	18286	3194	2893	521			1280	3816										FEB.
MARCH	18286	3194	2893	521			1280	3816										MARCH
APRIL	18286	3194	2893	521			1280	2944										APRIL
MAY	18286	3194	2893	521			1280	3072										MAY
JUNE	18286	3194	2893	521			1280	3672										JUNE
JULY	25144	3017	3978	716			1760	4224										JULY
AUG.	25144	3017	3978	716			1692	4227										AUG.
SEPT.	25144	3017	3978	716			1760	4400										SEPT.
OCT.	25144	3017	3978	716			1760	4576										OCT.
NOV.	19430	2332	3074	553			1360	3536										NOV.
DEC.	19430	2332	3074	553			1360	3808										DEC.
TOTAL	249152	29896	39418	7096			17278	42307										TOTAL
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	

	Average # Sows & Gilts in Herd	# Litters Farrowed	# Pigs Born	# Pigs Weaned		Average # Cows, Ewes, Mares	# Born	# Weaned		Average % Test for Dairy Cows	Average Dairy Cows Dry	Average Dairy Cows Milked
JAN.	80	20	160	145	JAN.				JAN.			
FEB.	80	20	150	155	FEB.				FEB.			
MARCH	80			145	MARCH				MARCH			
APRIL	80	20	170		APRIL				APRIL			
MAY	80	20	166	165	MAY				MAY			
JUNE	80			156	JUNE				JUNE			
JULY	110			197	JULY				JULY			
AUG.	110	20	175	168	AUG.				AUG.			
SEPT.	110	35	200		SEPT.				SEPT.			
OCT.	110				OCT.				OCT.			
NOV.	85	35	167	155	NOV.				NOV.			
DEC.	85	20	200		DEC.				DEC.			
TOTAL		190	1387	1206	TOTAL				AVERAGE			
	18	19	20	21		22	23	24		25	26	27

POULTRY:
Eggs produced: _____doz. $_____
Eggs sold: _____ doz. $_____
Eggs consumed: _____ doz. $ _____

BEST COPY AVAILABLE

FBMA I-Lesson 8 8.15 Revised 1993

FORM 30 **Enterprise:** CATTLE 321 **19___ LIVESTOCK ENTERPRISE DATA**

	PURCHASED FEED (protein, pre-mix, etc.)						GRAINS						ROUGHAGE					
	PROT						Corn						HAY					
	Quantity	$	Quantity	$	Quantity	$	Bushel	$	Bushel	$	Bushel	$	Tons	$	Tons	$	Pasture Days	
JAN.	400	48											12					JAN.
FEB.	400	48											12					FEB.
MARCH	400	48											12					MARCH
APRIL	400	48															1200	APRIL
MAY	400	48															1560	MAY
JUNE	400	48															1560	JUNE
JULY	400	48															1560	JULY
AUG.																	1560	AUG.
SEPT.	400	48															1560	SEPT.
OCT.	400	48															1560	OCT.
NOV.	400	48															1560	NOV.
DEC.	400	48											18					DEC.
TOTAL	4400	528											54	1170			12120	TOTAL
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	

	Average # Sows & Gilts in Herd	# Litters Farrowed	# Pigs Born	# Pigs Weaned		Average # Cows, Ewes, Mares	# Born	# Weaned		Average % Test for Dairy Cows	Average Dairy Cows Dry	Average Dairy Cows Milked
JAN.					JAN.	40			JAN.			
FEB.					FEB.	40			FEB.			
MARCH					MARCH	40	23		MARCH			
APRIL					APRIL	40	17		APRIL			
MAY					MAY	40			MAY			
JUNE					JUNE	40			JUNE			
JULY					JULY	40			JULY			
AUG.					AUG.	40			AUG.			
SEPT.					SEPT.	40		21	SEPT.			
OCT.					OCT.	35		17	OCT.			
NOV.					NOV.	35			NOV.			
DEC.					DEC.	35			DEC.			
TOTAL					TOTAL		40	38	AVERAGE			
	18	19	20	21		22	23	24		25	26	27

POULTRY:
Eggs produced: _____doz. $_____
Eggs sold: _____ doz. $_____
Eggs consumed: _____ doz. $ ___ __

19 88 **LIVESTOCK ENTERPRISE DATA** CATTLE 324 **Enterprise:** _____ **FORM 30**

	PURCHASED FEED (protein, pre-mix, etc.)						GRAINS						ROUGHAGE					
							Corn						HAY					
	Quantity	$	Quantity	$	Quantity	$	Bushel	$	Bushel	$	Bushel	$	Tons	$	Tons	$	Pasture Days	
JAN.																		JAN.
FEB.																		FEB.
MARCH																		MARCH
APRIL																		APRIL
MAY																		MAY
JUNE																		JUNE
JULY																		JULY
AUG.							62	173					1	30				AUG.
SEPT.																		SEPT.
OCT.																		OCT.
NOV.																		NOV.
DEC.																		DEC.
TOTAL							62	173					1	30				TOTAL
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	

	Average # Sows & Gilts in Herd	# Litters Farrowed	# Pigs Born	# Pigs Weaned		Average # Cows, Ewes, Mares	# Born	# Weaned		Average % Test for Dairy Cows	Average Dairy Cows Dry	Average Dairy Cows Milked
JAN.					JAN.				JAN.			
FEB.					FEB.				FEB.			
MARCH					MARCH				MARCH			
APRIL					APRIL				APRIL			
MAY					MAY				MAY			
JUNE					JUNE				JUNE			
JULY					JULY				JULY			
AUG.					AUG.				AUG.			
SEPT.					SEPT.				SEPT.			
OCT.					OCT.				OCT.			
NOV.					NOV.				NOV.			
DEC.					DEC.				DEC.			
TOTAL					TOTAL				AVERAGE			
	18	19	20	21		22	23	24		25	26	27

POULTRY:
Eggs produced: _____doz. $_____
Eggs sold: _____ doz. $_____
Eggs consumed: _____ doz. $ _____

FBMA I-Lesson 8 8.17 Revised 1993

FBMA I-Lesson 8 8.19 Revised 1993

FORM 30 **Enterprise:** Cattle **19 92 LIVESTOCK ENTERPRISE DATA**

	PURCHASED FEED (protein, pre-mix, etc.)						GRAINS						ROUGHAGE					
							Corn											
	Quantity	$	Quantity	$	Quantity	$	Bushel	$	Bushel	$	Bushel	$	Tons	$	Tons	$	Pasture Days	
JAN.													6	270				JAN.
FEB.													6	270				FEB.
MARCH													6	270				MARCH
APRIL																	945	APRIL
MAY																	975	MAY
JUNE																	945	JUNE
JULY																	1194	JULY
AUG.																	1194	AUG.
SEPT.																	1305	SEPT.
OCT.																	1348	OCT.
NOV.																	1365	NOV.
DEC.																		DEC.
TOTAL													8	430				TOTAL
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	

	Average # Sows & Gilts in Herd	# Litters Farrowed	# Pigs Born	# Pigs Weaned		Average # Cows, Ewes, Mares	# Born	# Weaned		Average % Test for Dairy Cows	Average Dairy Cows Dry	Average Dairy Cows Milked
JAN.					JAN.	30			JAN.			
FEB.					FEB.	30			FEB.			
MARCH					MARCH	30	27		MARCH			
APRIL					APRIL	30	7		APRIL			
MAY					MAY	30			MAY			
JUNE					JUNE	30			JUNE			
JULY					JULY	30			JULY			
AUG.					AUG.	30			AUG.			
SEPT.					SEPT.	30			SEPT.			
OCT.					OCT.	30			OCT.			
NOV.					NOV.	30		28	NOV.			
DEC.					DEC.	30			DEC.			
TOTAL					TOTAL		30	28	AVERAGE			
	18	19	20	21		22	23	24		25	26	27

POULTRY:
Eggs produced: _____doz. $_____
Eggs sold: _____ doz. $_____
Eggs consumed: _____ doz. $ _____

BEST COPY AVAILABLE

HO-8.4

FORM 34 **1988 LIVESTOCK PURCHASED FOR RESALE**

ENTERPRISE: CATTLE

	Purchased				Death Loss				Sales				
	Date	Quantity	Description	$ Amount	Date	Quantity	Description	$ Amount	Date	Quantity	Description	$ Amount	
1.	7/17	1	STEER	270					3/88	1	STEER	600	1.
2.													2.
3.													3.
4.													4.
5.													5.
6.													6.
7.													7.
8.													8.
9.													9.
10.													10.
11.													11.
12.													12.
13.													13.
14.													14.
15.													15.
16.													16.
17.													17.
18.													18.
19.													19.
20.													20.
21.													21.
22.													22.
23.													23.
24.													24.
25.													25.
26.													26.
27.													27.

FORM 36

19 88 MONTHLY LIVESTOCK INVENTORY RECORD

LIVESTOCK ENTERPRISE: SWINE 301

	Beginning Inventory			Purchased (plus)			Weaned (plus)			Sold (minus)			Died (minus)			Consumed (minus)			Adjustments (plus/minus)	Ending Inventory			
	Head	Lbs.	Value	Head	Lbs.	Value	Head	Lbs.	Value	Head	Lbs.	Value	Head	Lbs.	Value	Head	Lbs.	Value		Head	Lbs.	Value	
JAN.	232	41400	20285 00				145	3625	3263 00				2	60	54 00					375	64965	31357 00	JAN.
FEB.	375	64965	31357 00				155	3875	3488 00	2	1200	480 00	3	168	151 00	3	720	350 00		522	87478	42871 00	FEB.
MARCH	522	87478	42871 00				145	3625	3263 00	314	69080	27600 00	4	136	122 00					349	41881	22941 00	MARCH
APRIL	349	41881	22941 00																	349	41881	22941 00	APRIL
MAY	349	61881	37413 00				165	4125	3713 00	417	91770	36800 00								97	34236	43326 00	MAY
JUNE	97	36595	43326 00				186	3900	3510 00				7	196	176 00					276	80699	29160 00	JUNE
JULY	246	80299	29148 00				197	4925	4433 00											443	115224	40914 00	JULY
AUG.	443	115224	40914 00				168	4200	4410 00	491	187020	73116 00								120	41404	15720 00	AUG.
SEPT.	120	41404	15720 00																	120	41404	15720 00	SEPT.
OCT.	120	41404	29720 00	2	1500	520 00							4	104	94 00					118	32600	29200 00	OCT.
NOV.	118	32600	29200 00				155	3875	3488 00	25	10000	3500 00	4	116	104 00					214	76359	31992 00	NOV.
DEC.	244	76359	31992 00										2	185	167 00	3	720	350 00		289	76174	43326 00	DEC.
TOTAL							1286	32150	29538 00	1249	260040	184200 00	26	1017	914 00	6	1440	700 00					TOTAL

LIVESTOCK ENTERPRISE: CATTLE

	Beginning Inventory			Purchased (plus)			Born ~~Weaned~~ (plus)			Sold (minus)			Died (minus)			Consumed (minus)			Adjustments (plus/minus)	Ending Inventory			
	Head	Lbs.	Value	Head	Lbs.	Value	Head	Lbs.	Value	Head	Lbs.	Value	Head	Lbs.	Value	Head	Lbs.	Value		Head	Lbs.	Value	
JAN.	40	38000	15960 00																	40	38000	15960 00	JAN.
FEB.	40	38000	15960 00	1	375	270 00														41	38375	16230 00	FEB.
MARCH	41	38375	16230 00				40	2800	3000 00				2	140	150 00					79	41035	19080 00	MARCH
APRIL	79	41035	19080 00																	79	43430	20790 00	APRIL
MAY	79	43430	20790 00																	79	45825	22500 00	MAY
JUNE	79	45825	22500 00																	79	48220	24210 00	JUNE
JULY	79	48220	24210 00																	79	50615	25920 00	JULY
AUG.	79	50615	25920 00							1	950	600 00								78	52060	27030 00	AUG.
SEPT.	78	52060	27030 00																	78	54455	28740 00	SEPT.
OCT.	78	54455	28740 00							40	19300	12510 00								38	35155	17230 00	OCT.
NOV.	38	35155	17230 00	1	1700	680 00														39	36855	17910 00	NOV.
DEC.	39	36855	17910 00																	39	36855	17910 00	DEC.
TOTAL				2	2075	950 00	40	2800	3000 00	41	20250	13110 00	2	140	150 00								TOTAL

FBMA I-Lesson 8

8.23

Revised 1993

BEST COPY AVAILABLE

HO-8.6

FORM 37

19 88 MONTHLY FEED AND GRAIN INVENTORY RECORD

FEED AND/OR GRAIN: CORN 020

	Beginning Inventory		Purchased (plus)		Raised (plus)		Sold (minus)		Fed (minus)		Seed (minus)		Adjustments (plus/minus)	Ending Inventory		Comments	
	Qt.	Value	Qt.	Value	Qt.	Value	Qt.	Value	Qt.	Value	Qt.	Value		Qt.	Value		
JAN.	12000	26400 00							1280	2816 00				10720	23584 00		JAN.
FEB.	10720	23584 00							1280	2816 00				9440	20768 00		FEB.
MARCH	9440	20768 00							1280	2816 00				8160	17952 00		MARCH
APRIL	8160	17952 00							1280	2944 00				6880	15008 00		APRIL
MAY	6880	15008 00							1280	3072 00				5600	11936 00		MAY
JUNE	5600	11936 00							1280	3072 00				4320	8864 00		JUNE
JULY	4320	8864 00							1760	4224 00				2560	4640 00		JULY
AUG.	2560	4640 00			17320	43800 00			1760	4400 00				18120	43540 00		AUG.
SEPT.	18120	43540 00							1760	4400 00				16360	39140 00		SEPT.
OCT.	16360	39140 00							1760	4576 00				14600	34564 00		OCT.
NOV.	14600	34564 00							1360	3536 00				13240	31028 00		NOV.
DEC.	13240	31028 00							1360	3808 00				11880	27220 00		DEC.
TOTAL					17320	43200 00			17440	42480 00							TOTAL

FEED AND/OR GRAIN:

	Beginning Inventory		Purchased (plus)		Raised (plus)		Sold (minus)		Fed (minus)		Seed (minus)		Adjustments (plus/minus)	Ending Inventory		Comments	
	Qt.	Value	Qt.	Value	Qt.	Value	Qt.	Value	Qt.	Value	Qt.	Value		Qt.	Value		
JAN.																	JAN.
FEB.																	FEB.
MARCH																	MARCH
APRIL																	APRIL
MAY																	MAY
JUNE																	JUNE
JULY																	JULY
AUG.																	AUG.
SEPT.																	SEPT.
OCT.																	OCT.
NOV.																	NOV.
DEC.																	DEC.
TOTAL																	TOTAL

FBMA I-Lesson 8 8.25 Revised 1993

147

148

HO-87

FORM 32

19 88 FIELD RECORD

	FIELD NO.	DESCRIPTION	ACRES	CROP	TILLAGE TIME/ TYPE*	SEED			FERTILIZER						LIME			
						Date	Variety	Rate/ Acre	Date	Application Method**	Pounds Applied/Acre N	P_2O_5	K_2O		Date	Tons/ Acres	Test	
1.	1	SW Farm	80	Soybean	S-P	5/15/88	Anderson	70 lbs	5/15/88	SD	0	18	35		4/20/87	—	6.0	1.
2.	2	SW Farm	45	Soybean	S-P	5/06/88	Anderson	70 lbs	5/06/88	SD	0	18	35		4/20/87	—	6.5	2.
3.	3	SW Farm	40	Soybean	S-P	5/06/88	Longsworth	70 lbs	5/06/88	SD	0	18	35		4/11/87	—	6.7	3.
4.	4	Bottoms	85	Corn	S-P	5/06/88	1412	30,000 seeds	5/06/88	SD	130	60	80		4/20/87	—	6.4	4.
5.	5	Bottoms	90	Corn	S-P	5/13/88	1412	30,000 seeds	5/13/88	SD	130	60	80		4/20/87	—	6.5	5.
6.	6	Johnson Farm	50	Wheat	F-FC	10/06/88	Topper	1.8 bu	10/04/88	PPI	50	35	35		5/02/88	200	5.5	6.
7.	7	Johnson Farm	75	Wheat	F-FC	10/07/88	Topper	1.8 bu	10/05/88	PPI	50	35	35		5/05/88	200	5.4	7.
8.	8	Johnson Farm	40	Wheat	F-FC	10/09/88	Topper	1.8 bu	10/08/88	PPI	50	35	35		5/08/88	200	5.4	8.
9.	9	Main Farm	100	Pasture	—	—		—	5/18/88	TD	17	17	17		—	—	—	9.
10.	10	Main Farm	80	Pasture	—	—		—	5/19/88	TD	17	17	17		—	—	—	10.
11.	11	Main Farm	55	CRP(Past)	—	—		—	5/21/88	TD	17	17	17		—	—	—	11.
12.																		12.
13.																		13.
14.																		14.
15.																		15.
16.																		16.
17.																		17.
18.																		18.
19.																		19.
20.																		20.
21.																		21.
22.																		22.
23.																		23.
24.																		24.
25.																		25.
26.																		26.

*TIME: F = Fall, S = Spring. Type: P = Plow, C = Chisel, DH = Disk Harrow, FC = Field Cultivator, CU = Cultivator

**Application Method: D = Deep, ST = Starter, SD = Side Dress, TD = Top Dress, PPI = Preplant Incorporate

FBMA I-Lesson 8 8.27 Revised 1983

19 88 FIELD RECORD Cont.

FORM 33

	HERBICIDE				HERBICIDE				HERBICIDE				INSECTICIDE			HARVEST			NOTES (special conditions, rainfall, irrigation, etc.)	
	Date	Kind	Method	Rate/ Acre	Date	Kind	Method	Rate/ Acre	Date	Kind	Method	Rate/ Acre	Date	Kind	Rate/ Acre	Date	Yield/ Acre	% Moisture		
1.	5/10/88	LASSO	PPI	2 lb													28 bu			1.
2.	5/10/88	LASSO	PPI	1 lb													26 bu			2.
3.	5/10/88	LASSO	PPI	1 lb													30 bu			3.
4.	5/30/88	BADVIL	TD	1/2 PT													104 bu		SLIGHT WIND	4.
5.	5/30/88	BADVIL	TD	1/2 PT													106 bu			5.
6.	–	–	–														40 bu			6.
7.	–	–	–														32 bu			7.
8.	–	–	–														22 bu		EXTENSIVE DISEASE PROBLEMS	8.
9.	–	–	–														3 ALM			9.
10.	–	–	–														3 ALM			10.
11.	–	–	–														0			11.
12.																				12.
13.																				13.
14.																				14.
15.																				15.
16.																				16.
17.																				17.
18.																				18.
19.																				19.
20.																				20.
21.																				21.
22.																				22.
23.																				23.
24.																				24.
25.																				25.
26.																				26.

FBMA I-Lesson 8 8.29 Revised 1993

151

152

HO-8.9

19 ___ ANNUAL ENTERPRISE EXPENSE ALLOCATION

FORM 31

		NAME OF ENTERPRISE:			Resale										
	COSTS (OPERATOR)	TOTAL	SWINE	CATTLE	CATTLE	CORN	BEANS	WHEAT	PASTURE						
1.	Breeding Fees	1200	800	400											1.
2.	Chemicals	6450				2280	3630		540						2.
3.	Conservation														3.
4.	Feed PROTEIN	30472	29896	528	48										4.
5.	CREEP	7096	7096												5.
6.															6.
7.															7.
8.	Fertilizer and Lime	17385				8205	2640	5280	1260						8.
9.	Freight and Trucking	600	450	150											9.
10.	Gasoline, Fuel, and Oil	7100	1420	355		1775	1775	1420	355						10.
11.	Insurance	2800	560	140		700	700	560	140						11.
12.	Interest: Mortgage														12.
13.	Interest: Other	16393	3279	820		4098	4098	3279	819						13.
14.	Labor Hired	644	129	32		161	161	129	32						14.
15.	Machine Hire	6215	6215												15.
16.	Cash Rent														16.
17.	Repairs: Machine	10040	2008	502		2510	2510	2008	502						17.
18.	Repairs: Buildings and Fences	600	120	30		150	150	120	30						18.
19.	Seeds and Plants	4600				2250	1200	1150							19.
20.	Storage	1020	204	51		255	255	204	51						20.
21.	Supplies	520	390	130											21.
22.	Taxes	3586	717	179		897	897	717	179						22.
23.	Utilities - Farm Share	2386	477	119		597	597	477	119						23.
24.	Veterinarian and Medicine	1960	1250	710											24.
25.	Miscellaneous Farm Expenditures	1450	290	73		363	363	290	71						25.
26.															26.
A.	TOTAL CASH COST (lines 1 thru 26)	122317	55301	4219	48	34241	18976	15634	4098						A.
27.	Feed - Raised	48603													27.
28.	Value of Unpaid Labor														28.
29.	Livestock Depreciation	5790													29.
30.	Machine Depreciation	7531													30.
31.	Building Depreciation	2928													31.
32.	Cost Landlord Acres														32.
33.	Livestock Purchased for Resale	270													33.
34.															34.
B.	TOTAL (lines A + 27 thru 34)	187639													B.

SAMPLE ENTRIES FOR FORM 30
LIVESTOCK ENTERPRISE DATA

January - December 1992

1 bull - 1,500 pounds average

30 cows on hand first of year - 1,000 pounds average

23 calves born in March

7 calves born in April

2 calves died at birth

28 calves weaned in November

100# mineral @ $15/cwt. every month

January - February - March - December:
12 big bales (@ 1,000# bales @ $45/ton) per month
2 ton alfalfa (@ $80/ton) per month

Pasture:

April - May - June:
30,000# of beef cows
1,500# bull

July - August:
30,000# of beef cows
7,000# of calves
1,500# bull

September - October:
30,000# of beef cows
12,000# of calves
1,500# bull

November:
30,000# of beef cows
14,000# of calves
1,500# bull

SAMPLE ENTRIES FOR FORMS 32 AND 33
FIELD RECORD

Field 1 (south field Brown place)

80 acres

fall plowed

spring (D.H. and F.C.)

seeded on April 23rd

Pioneer 3340
18,500 population

fertilizer - March 20 PPI

125-40-80

April 23rd ATRIX - 2.25# - broadcast

October 10th

harvested 105 bu per acre at 16.5% moisture

QUIZ--ENTERPRISE RECORDS

Consider the following situation:

Farmer Smith owns a 463-acre farm and rents an additional 200 acres from two different landlords.

On the owned farm, crops grown include 120 acres of corn in two fields, 87 acres of grain sorghum in three fields, 125 acres of wheat in three fields, and 105 acres of improved pasture.

On one rented farm, 80 acres is planted in soybeans. On the other rented farm, 140 acres is planted in corn. Cash rent of $80 per acre is paid for the bean ground and a 2/3-1/3 crop-share agreement is held on the corn ground.

In addition to the cropping program, beef and swine enterprises are owned by Smith.

The beef enterprise consists of a herd of 25 beef cows raising calves. The calves are generally backgrounded and sold at around 700 pounds.

The swine enterprise consists of a sow herd of around 60 sows and a market hog finishing operation. In addition to the raised pigs, Smith generally buys an additional 1500 head of feeder pigs and finishes them to market weight.

1. What are questions Smith might ask about the operation before deciding how to separate enterprises for analysis?

2. If you were Smith, how would you break your enterprises apart for analysis?

General Enterprises	Enterprise Breakdown for Analysis
Crops:	
1. corn	
2. grain sorghum	
3. wheat	
4. soybeans	
5. pasture	
Livestock:	
1. beef	
2. swine	

KEY FOR QUIZ (HO-8.3)

1. Some probable questions Smith should ask about the operation are:

   a. Which enterprise or enterprises in my farming operation are making money?

   b. Which crops are producing the best returns?

   c. Are my rental agreements fair, and am I making enough on rented ground to justify it?

   d. Which part of my hog enterprise is returning the most profit?

   e. Are my hogs helping me do a better job marketing my grain?

2. Smith's operation could be broken down for analysis in a number of ways, but one logical way might be as follows:

General Enterprises	Enterprise Breakdown for Analysis
Crops:	
1. corn	120 acres owned 140 acres rented
2. grain sorghum	87 acres owned
3. wheat	125 acres owned
4. soybeans	80 acres rented
5. pasture	105 acres owned
Livestock:	
1. beef	all beef
2. swine	60 sows and pigs to market 1500 purchased feeder pigs to market

FARM BUSINESS MANAGEMENT ANALYSIS

Unit I: Establishing a Farm Accounting System

Lesson 9: Completing Farm Support Records

A. Review

The previous lesson, Keeping Enterprise Records, should be reviewed. List all conclusions reached at your last meeting. Possible conclusions may have included:

1. Enterprise records are necessary in determining how profitable each enterprise has been and which enterprises are really supporting the farm business.

2. A farmer's operation can be split into as many enterprises as desired for an analysis.

3. The livestock enterprise data form (Form 30) must be kept up-to-date monthly.

4. A separate Form 30 will be kept for each livestock enterprise to be analyzed.

5. All grain crop and forage crop records are kept on Forms 32 and 33.

6. All monthly inventories of feed, livestock and livestock purchased for resale are kept on Forms 34, 36, and 37.

7.

B. Objective

To develop and maintain hired labor, independent contractor, and credit records for the farm business.

C. Motivation

Ask enrollees if they know exactly how much they have borrowed, when it is due, how much is interest and how much is principal. If so, where is that information compiled so other family members can easily find it?

Point out that a very important aspect of keeping records is keeping support records on a number of farm-related activities such as labor, independent contractors, and farm credit.

D. Key Points

Key points that will be accomplished are as follows:

1. *How are hired labor records maintained on farm employees?*

2. *How are independent contractor records maintained?*

3. *How should intermediate and long-term notes and mortgage records be maintained?*

4. *How should short-term loan records be maintained?*

E. Introduction of Information

Tax laws are very explicit as to hired labor and independent contractor expenses. It is very important that proper records are kept to support labor expenses. Forms 21 and 22 in the Missouri Farm Business Record Book provide a means of completing that task.

1. *How are hired labor records maintained on farm employees?*

Use Form 21 in the Missouri Farm Business Record Book to discuss these points.

a. Each employee hired in the farm business should have a separate section.

b. Basic information about the employee's name, address, and social security number should be recorded.

c. The date, hours worked, gross wages paid, deduction information, and net amount paid should be recorded for every time the employee works for you. Form 8, Column 45, amount should equal the amount in the "Net Paid" Column.

d. To determine the social security and income tax guidelines refer to the current Farmer's Tax Guide.

2. ***How are independent contractor records maintained?***

Use Form 22 in the Missouri Farm Business Record Book to discuss these points.

a. Each individual or firm for which service was contracted should have a separate section.

b. Basic information about the contractor's name, address, and social security number should be recorded. Note: only contractors that are not incorporated need this information recorded. Check with each contractor for his status.

c. The date, acres or hours worked, description of work done, and net amount paid should be recorded for every time the contractor works for you.

3. ***How should intermediate and long-term notes and mortgage records be maintained?***

Use Form 23 in the Missouri Farm Business Record Book to discuss these points.

a. Form 23 is divided for the recording of three long-term or intermediate liabilities.

b. Basic information about the creditor's name, purpose of the loan, amount, and terms should be noted at the top of each section.

c. The amount entered in the "Total Cost" Column of Form 7 should equal the total payment made.

d. The figure entered on Form 8, Column 43 or 44, should equal the amount of interest paid.

e. The figure entered on Form 10, Column 64, should equal the amount of principal paid.

f. The unpaid principal balance is equal to the amount of the loan until the first payment is made. After the payment is made, the amount of principal (not the amount of interest) is subtracted from the previous unpaid principal balance.

4. ***How should short-term loan records be maintained?***

Use Form 24 in the Missouri Farm Business Record Book to discuss these points.

a. Form 24 has three separate liabilities sections for recording on the same form.

b. Basic information such as creditor's name, purpose of the loan, and the terms of repayment should be recorded at the heading of each section.

c. Line 1 starts with the date the liability occurs and the total amount borrowed.

d. The figure in the "Total Cost" Column of Form 7 should equal the total amount paid.

e. Form 8, Column 43 or 44, should equal the amount of interest paid.

f. Form 10, Column 64, should equal the amount of principal paid.

g. The unpaid principal balance is determined by subtracting the amount of principal paid (not the total payment) from the previous unpaid principal balance.

F. Discussion

Sufficient time should be allotted so that enrollees have all questions concerning the forms explained. Problems concerning terms of loans, etc. may be discussed. Because of the privacy of loans, individual meetings would be the best time to clarify any questions concerning entries.

G. Conclusions

Conclusions that may be reached include:

1. Hired labor tax records are required on all individuals employed by the farm business. Form 21 is specifically designed for that purpose.

2. Payments to independent contractors require good records to meet federal tax reporting requirements.

3. Precise loan records are of value for a number of management and cash flow decisions.

4.

Announcements

Social

Individual Instruction

Review all expense and receipt records and check Form 27. Go over the forms for hired labor and independent contractors. Check to see if they are having any problems with completing the loan forms.

Materials Needed

Instructor

Missouri Farm Business Record Book
Farmer's Tax Guide (current year)

Student

Missouri Farm Business Record Book

FARM BUSINESS MANAGEMENT ANALYSIS

Unit I: Establishing a Farm Accounting System

Lesson 10: Using the Concept of Time Value in Planning

A. Review

The previous lesson, Completing Farm Support Records, should be reviewed. List all conclusions reached at your last meeting. Possible conclusions may have included:

1. Hired labor tax records are required on all individuals employed by the farm business. Form 21 is specifically designed for that purpose.

2. Payments to independent contractors require good records to meet federal tax reporting requirements.

3. Precise loan records are of value for a number of management and cash flow decisions.

4.

B. Objective

To use the concept of time value in planning investments.

C. Motivation

Tell the class if they will give you $1,000 per year for ten years, you will then give them $1,000 per year for as long as they want to accept it. When they decide they want to stop, you will return their original $10,000. As an example, at this rate of $1,000 per year for ten years, they will have put in $10,000. If they get the $1,000 per year returned for 30 years, they will receive $30,000 plus the original $10,000 for a total of $40,000.

Teachers, don't worry; you are safe as long as interest is at 8 percent or over. You take the $1,000 each year and place it in an interest-bearing account at 8 percent compounded annually. At the end of 10 years, you will have $14,487 (HO-10.2, future value annuity table). You leave it in the account to earn 8 percent annual interest and receive $1,159 annually ($14,487 x .08 = $1,159. Of this you send $1,000 each year to the investor and keep the $159 for your postage stamp and idea. When they decide to quit, you return their $10,000 and keep the extra $4,487 for your trouble.

D. Key Points

Key points that will be accomplished are as follows:

1. *How is future value determined?*

2. *How is present value determined?*

3. *How is the index of profitability used?*

4. *How are loan repayment (annuity) tables used?*

E. Introduction of Information

Point out that money has a time value. Or, put another way, a dollar in the hand today is worth more than a dollar to be received sometime in the future. The basic reason is that the dollar received today could be put to work to earn more money.

1. *How is future value determined?*

a. Distribute HO-10.1. Point out that HO-10.1 is a compounding table. As an example, if $1 is placed in a savings account and left for 10 years at 10 percent compounded interest, there would be $2.59 in the account. How can this be used?

(1) To determine the effect of inflation. Ask the group what they think the inflation rate will be for the next five years. Then, determine an average price of land in the community. As an example, if they think inflation will average 8 percent and land is priced at $1,000 per acre now, then if land prices match the inflation rate, the price five years from now will be $1,470 per acre (1.469 x $1,000 = $1,470). Another interesting method is to divide the inflation rate into 72 to determine the number of years needed to double the value. As an example, the 8 percent inflation rate will double value in 9 years (72 ÷ 8 = 9). Caution the group that this doesn't mean everyone should buy land--it has to be paid for in the meantime, and the inflation rate is not guaranteed.

(2) To determine returns from alternative investments. As an example, many established farmers have funds to invest in non-farm investments. This table would give them the dollar yield they can expect sometime in the future at certain rates of return.

(3) Other examples that fit the local situation.

b. Distribute HO-10.2. This table is a compound annuity table. As an example, if $1 is placed in a savings account each year for 10 years at 8 percent interest compounded annually, it will then be $14.49. Remember, a total of $10 over 10 years was placed in the account; the returns of interest are $4.49. The example used in the motivation is an illustration of using this table. Also, use TM-10.1 (HO-10.6) to illustrate how to compare the net cost of protection on life insurance policies.

2. ***How is present value determined?***

Explain that this concept is the opposite of future value. In that case, we knew the value today and determined the value sometime in the future. With the present value concept, we know the returns we expect in the future and use this concept to determine the value at the present.

a. Distribute copies of HO-10.3. This is a present value table that tells us the value at the present of $1 received in the future at different interest rates. As an example, if we will receive $1 from an investment five years from now and interest is 8 percent, the value today is $.68--or, the most we would want to pay for an investment that will return $1 five years from now is $.68. One example of the use of this concept is:

1. A timber buyer has offered to buy the timber in your woodlot for $13,000. After checking with the farm forester, you find that the forester estimates that this stand would be worth $20,000 ten years from now. If interest is 8 percent, should you sell now or wait 10 years? There will be practically no costs associated with waiting 10 years. Use HO-10.3, 10 years at 8 percent, to find .463 to determine the present value of $1 received 10 years from now.

   $20,000 x .463 = $9,260

   Because the $20,000 has a present value of only $9,260, the farmer would probably want to sell the trees for $13,000.

b. Distribute copies of HO-10.4. This is a present value annuity table that reflects the value today of a "stream" of earnings in the future. Some examples of using this concept are:

(1) One of the enrollees is considering the purchase of a new riding lawn mower. The price is $1,000 and the dealer offers to carry it if the enrollee pays $400 per year for three years. If the farmer figures interest at 8 percent, which would be the most profitable? Refer to HO-10.4, 3 years at 8 percent, and find 2.58.

$400 x 2.58 = $1,032

With these assumptions, the farmer would pay the $1,000 now because the present value of $400 per year for three years at 8 percent is $1,032, or $32 more.

(2) One of the enrollees is considering building a hog feeding floor for 500 head. According to the best information available, it will cost about $100 per head equipped, or a total of $50,000, and last about 12 years. Plans are to turn 2 1/2 groups, or 1,250 hogs per year. Budgets indicate that about $6 per hog above variable costs (including pig, feed, labor, etc.; but not depreciation or interest) can be expected. Would this be a profitable investment if interest is figured at 8 percent?

$6/hog x 1,250 hogs/year = $7,500
income over variable cost per year

$7,500 x 7.54 (from HO-10.4, 12 years at 8%) = $56,550

The $56,550 is the present value of the earnings for the next 12 years and because it is more than the cost ($50,000) of the feeding floor, it is profitable. Caution the group that this doesn't mean this is the most profitable alternative nor does it indicate that it is feasible, as the farmer would have to be able to pay for it.

3. ***How is the index of profitability used?***

Explain that this technique allows us to compare investments of alternative rates of return, lengths of life, etc., and select the most profitable. As an example, if the present value of an investment is greater than its cost, it is profitable--the present value of earnings from a $100 investment is $105. The index of profitability is 1.05 (105 ÷ 100 = 1.05). When the index is 1.0 or over, it is profitable, and the investment with the highest index is the most profitable.

a. Work an example of a farmer with an opportunity to purchase a neighboring 80 acres at $1,500 per acre or a total of $120,000. Assume the farmer is 55 years old, would expect to keep the farm for 10 years and conservatively expects land inflation to occur at about 6 percent per year. If the land was rented, the landlord's share of the income over variable costs would be $8,000. (The renter's share is not considered because this is return to machinery, labor, etc.) If the farmer uses an 8 percent interest figure, would it be profitable?

Returns:

Annual Earnings = $8,000/year x 6.71 (HO-10.4, 10 years at 8%) = $53,680

Sale of Farm in 10 years = $120,000 x 1.79 (HO-10.1, 10 years at 6%) = $214,800 (sale price in 10 years if 6 percent inflation)

Present value of $214,800 in 10 years at 8 percent = $214,800 x .463 (HO-10.3, 10 years at 8%) = $99,452.

Present value of earnings	=	$ 53,680
Present value of sale of farm	=	$ 99,452
		$153,132

To determine in index of profitability, divide $153,132 by $120,000 = 1.2761, or approximately 1.28.

(NOTE: It would be more correct to inflate the annual earnings also, but this may confuse people in a class situation.)

b. Compare the index of profitability from alternative investments:

(1) The farm above was 1.28.

(2) The feeding floor in a previous example was 1.13 ($56,550 ÷ $50,000).

(3) The farmer could invest $50,000 in interest bearing securities that compound at 10 percent. This would have a return in 10 years of $129,500 ($50,000 x 2.59) (HO-10.1, 10 years at 10%). The present value of the $129,500 at 8 percent is $59,959 (HO-10.3, 10 years at 8%), or an index of 1.20.

Of the previous investments, the 80-acre farm looks best, but it has this advantage because of the 6 percent inflation.

4. ***How are loan repayment (annuity) tables used?***

Point out that all of the examples above were profitable. However, are they feasible? In other words, can the debt be serviced?

a. Distribute HO-10.5. Point out that this is an amortization table that tells us the principal and interest due each year to service a loan of various lengths and interest rates. As an example, if $1 is borrowed for 10 years at 10 percent, the annual payment is $.1627.

1. Use the 80-acre farm example above and assume the farmer has $70,000 down payment and the seller will finance the balance for 10 years at 10 percent. The amount borrowed is $50,000 ($120,000 - $70,000 = $50,000).

   $50,000 x .1627 = $8,140

   The $8,000 earnings from the farm would almost meet the payments and a farmer in this situation could probably find $140 per year from another source to make it feasible.

2. Assume a young farmer with 29 percent down or $34,800 is also interested in the same farm. The seller would have to finance $85,200 ($120,000 - $34,800 = $85,200) and the annual payments would be $13,871 ($85,200 x .1627). Because the land returns were $8,000, it is probably not feasible because other debts may have a claim on other income. An alternative would be to secure financing from another source for longer terms and lower interest. As an example, a 40-year loan at 5 percent on the $85,200 would have an annual payment of $4,302.60.

F. Discussion

Sufficient time should be allotted for enrollees to ask questions and discuss the concept of time value of money. Be sure the discussion session enables farmers to be able to use the concept in making plans in their farming operations.

G. Conclusions

Conclusions that may be reached include:

1. Time affects the value of money.

2. Short-term investments (less than one year) can be compared without using the concept of time value of money.

3. In order to make a comparison between two investments, we should calculate the incomes using present values.

4. The index of profitability permits us to compare investments of various sizes, returns, payback periods, etc.

5. An investment must be feasible, not just profitable.

6.

Announcements

The next meeting will be held in October. I'll be sending reminders to you.

Social

Individual Instruction

Suggest to enrollees that you compare some alternative investments that they have in their long-range plans at your meeting this month. Suggest they have some cost figures, etc., available with which to work.

Materials Needed

Instructor

TM-10.1	Compare the Cost of Life Insurance (combined with HO-10.6)

Students

HO-10.1	Future Value at Compound Interest
HO-10.2	Future Value of a Uniform Series of Annuity of $1
HO-10.3	Present Value of $1
HO-10.4	Present Value of Annuity of $1
HO-10.5	Annual Amortization Table
HO-10.6	Compare the Cost of Life Insurance (combined with TM-10.1)

COMPARE THE COST OF LIFE INSURANCE

Type Policy and/or Company	(1) Annual Premium	(2) Opportunity Cost of $1 @___%	(3) Opportunity Cost of Policy	(4) Projected Cash Value at age __	(5) Cost of Protection

As an example, if a $10,000 whole life policy can be purchased at age 25 for $170 annual premiums, 5% is the estimated interest cost, and the cash value at age 65 for the policy is $11,420, the cost of $10,000 protection for 40 years is $9114.30.

Type Policy and/or Company	(1) Annual Premium	(2) Opportunity Cost of $1 @___%	(3) Opportunity Cost of Policy	(4) Projected Cash Value at age __	(5) Cost of Protection
Whole Life	$170.00	$120.79	$20,534.30	$11,420.00	$9,114.30

1. Annual premium on policy - get from insurance agent.

2. The number of dollars you would have in a savings account if you put $1 per year in for 40 years @ 5% and it was compounded annually. Use Future Value Table, HO-10.1.

3. The number of dollars you would have in a savings account if you put $170 per year in for 40 years @ 5% and it was compounded annually. In this table, column 3 is arrived at by multiplying column 1 x column 2.

4. The estimated or projected cash value - get this information from the policy or the insurance agent.

5. Net cost of protection - subtract column 4 from column 3.

NOTE: The interest rate used in the Future Value Table is important - be realistic on what you can earn and/or pay.

Future Value at Compound Interest
$FV = (1 + i)^n$

Year	4%	5%	6%	7%	8%	9%	10%	11%	12%
1	1.0400	1.0500	1.0600	1.0700	1.0800	1.0900	1.1000	1.1100	1.1200
2	1.0816	1.1025	1.1236	1.1449	1.1664	1.1881	1.2100	1.2321	1.2544
3	1.1248	1.1576	1.1910	1.2250	1.2597	1.2950	1.3310	1.3676	1.4049
4	1.1698	1.2155	1.2624	1.3107	1.3604	1.4115	1.4641	1.5180	1.5735
5	1.2166	1.2762	1.3382	1.4025	1.4693	1.5386	1.6105	1.6850	1.7623
6	1.2653	1.3400	1.4185	1.5007	1.5868	1.6771	1.7715	1.8704	1.9738
7	1.3159	1.4071	1.5036	1.6058	1.7138	1.8280	1.9487	2.0761	2.2106
8	1.3685	1.4774	1.5938	1.7181	1.8509	1.9925	2.1435	2.3045	2.4759
9	1.4233	1.5513	1.6894	1.8384	1.9990	2.1718	2.3579	2.5580	2.7730
10	1.4802	1.6288	1.7908	1.9671	2.1589	2.3673	2.5937	2.8394	3.1058
11	1.5394	1.7103	1.8982	2.1048	2.3316	2.5804	2.8531	3.1517	3.4785
12	1.6010	1.7958	2.0121	2.2521	2.5181	2.8126	3.1384	3.4984	3.8959
13	1.6650	1.8856	2.1329	2.4098	2.7196	3.0658	3.4522	3.8832	4.3634
14	1.7316	1.9799	2.2609	2.5785	2.9371	3.3417	3.7974	4.3104	4.8871
15	1.8009	2.0789	2.3965	2.7590	3.1721	3.6424	4.1772	4.7845	5.4735
16	1.8729	2.1828	2.5403	2.9521	3.4259	3.9703	4.5949	5.3108	6.1303
17	1.9479	2.2920	2.6927	3.1588	3.7000	4.3276	5.0544	5.8950	6.8660
18	2.0258	2.4066	2.8543	3.3799	3.9960	4.7171	5.5599	6.5435	7.6899
19	2.1068	2.5269	3.0255	3.6165	4.3157	5.1416	6.1159	7.2633	8.6127
20	2.1911	2.6532	3.2071	3.8696	4.6609	5.6044	6.7274	8.0623	9.6462
25	2.6658	3.3863	4.2918	5.4274	6.8484	8.6230	10.8347	13.5854	17.0000
30	3.2433	4.3219	5.7434	7.6122	10.0626	13.2676	17.4494	22.8922	29.9599
35	3.9460	5.5160	7.6860	10.6765	14.7853	20.4139	28.1024	38.5748	52.7996
40	4.8010	7.0399	10.2857	14.9744	21.7245	31.4094	45.2592	65.0008	93.0509

Future Value at Compound Interest
$FV = (1 + i)^n$

Yr.	13%	14%	15%	16%	17%	18%	19%	20%
1	1.1300	1.1400	1.1500	1.1600	1.1700	1.1800	1.1900	1.2000
2	1.2769	1.2996	1.3225	1.3456	1.3689	1.3924	1.4161	1.4400
3	1.4428	1.4815	1.5208	1.5608	1.6016	1.6430	1.6851	1.7280
4	1.6304	1.6889	1.7490	1.8106	1.8738	1.9387	2.0053	2.0736
5	1.8424	1.9254	2.0113	2.1003	2.1924	2.2877	2.3863	2.4883
6	2.0819	2.1949	2.3130	2.4363	2.5651	2.6995	2.8397	2.9859
7	2.3526	2.5022	2.6600	2.8262	3.0012	3.1854	3.3793	3.5831
8	2.6584	2.8525	3.0590	3.2784	3.5114	3.7588	4.0213	4.2998
9	3.0040	3.2519	3.5178	3.8029	4.1084	4.4354	4.7854	5.1597
10	3.3945	3.7072	4.0455	4.4114	4.8068	5.2338	5.6946	6.1917
11	3.8358	4.2262	4.6523	5.1172	5.6239	6.1759	6.7766	7.4300
12	4.3345	4.8179	5.3502	5.9360	6.5800	7.2875	8.0642	8.9161
13	4.8980	5.4924	6.1527	6.8857	7.6986	8.5993	9.5964	10.6993
14	5.5347	6.2613	7.0757	7.9875	9.0074	10.1472	11.4197	12.8391
15	6.2542	7.1379	8.1370	9.2655	10.5387	11.9737	13.5895	15.4070
16	7.0673	8.1372	9.3576	10.7480	12.3303	14.1290	16.1715	18.4884
17	7.9860	9.2764	10.7612	12.4676	14.4264	16.6722	19.2441	22.1861
18	9.0242	10.5751	12.3754	14.4625	16.8789	19.6732	22.9005	26.6233
19	10.1974	12.0556	14.2317	16.7765	19.7483	23.2144	27.2516	31.9479
20	11.5230	13.7434	16.3665	19.4607	23.1055	27.3930	32.4294	38.3375
25	21.2305	26.4619	32.9189	40.8742	50.6578	62.6686	77.3880	95.3962
30	39.1158	50.9501	66.2117	85.8498	111.0646	143.3706	184.6752	237.3762
35	72.0685	98.1001	133.1755	180.3140	243.5034	327.9972	440.7005	590.6681
40	132.7815	188.8834	267.8635	378.7211	533.8686	750.3782	1051.6674	1469.7713

Future Value of a Uniform Series of Annuity of $1

$$V_N = \$1\left[\frac{(1+i)^N-1}{i}\right] = USFV_{i,N}$$

n	.05%	1%	1.5%	2%	2.5%	3%	3.5%	4%	5%	6%
1	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2	2.005	2.010	2.015	2.020	2.025	2.030	2.035	2.040	2.050	2.060
3	3.015	3.030	3.045	3.060	3.076	3.091	3.106	3.122	3.152	3.184
4	4.030	4.060	4.091	4.122	4.153	4.184	4.214	4.246	4.310	4.375
5	5.050	5.101	5.152	5.204	5.256	5.309	5.362	5.416	5.526	5.637
6	6.076	6.152	6.230	6.308	6.388	6.468	6.550	6.633	6.802	6.975
7	7.106	7.214	7.323	7.434	7.547	7.662	7.779	7.898	8.142	8.394
8	8.141	8.286	8.432	8.583	8.736	8.892	9.052	9.214	9.549	9.897
9	9.182	9.369	9.559	9.755	9.955	10.159	10.368	10.583	11.027	11.491
10	10.228	10.462	10.703	10.950	11.203	11.464	11.731	12.006	12.578	13.181
11	11.279	11.567	11.863	12.169	12.483	12.808	13.142	13.486	14.207	14.972
12	12.336	12.683	13.041	13.412	13.796	14.192	14.602	15.026	15.917	16.870
13	13.397	13.809	14.237	14.680	15.140	15.618	16.113	16.627	17.713	18.882
14	14.464	14.947	15.450	15.974	16.519	17.086	17.677	18.292	19.599	21.051
15	15.537	16.097	16.682	17.293	17.932	18.599	19.296	20.024	21.579	23.276
16	16.614	17.258	17.932	18.639	19.380	20.157	20.971	21.825	23.657	25.673
17	17.697	18.430	19.201	20.012	20.865	21.762	22.705	23.698	25.840	28.213
18	18.786	19.615	20.489	21.412	22.386	23.414	24.500	25.645	28.132	30.906
19	19.880	20.811	21.797	22.841	23.946	25.117	26.357	27.671	30.539	33.760
20	20.979	22.019	23.124	24.297	25.545	26.870	28.280	29.778	33.066	36.786
25	26.559	28.243	30.063	32.030	34.158	36.459	38.950	41.646	47.727	54.865
30	32.280	34.785	37.539	40.568	43.903	47.575	51.663	56.085	66.439	79.058
40	44.159	48.886	54.268	60.402	67.403	75.401	84.550	95.026	120.800	154.762
50	56.645	64.463	73.683	84.579	97.484	112.797	130.998	152.667	209.348	290.336

Future Value of a Uniform Series of Annuity of $1

$$V_N = \$1\left[\frac{(1+i)^N-1}{i}\right] = USFV_{i,N}$$

n	7%	8%	9%	10%	12%	14%	16%	20%	25%
1	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2	2.070	2.080	2.090	2.100	2.120	2.140	2.160	2.200	2.250
3	3.215	3.246	3.278	3.310	3.374	3.440	3.506	3.640	3.813
4	4.440	4.506	4.573	4.641	4.779	4.921	5.066	5.368	5.766
5	5.751	5.867	5.985	6.105	6.353	6.610	6.877	7.442	8.207
6	7.153	7.336	7.523	7.716	8.115	8.536	8.977	9.930	11.259
7	8.654	8.923	9.200	9.487	10.089	10.730	11.414	12.916	15.073
8	10.260	10.637	11.028	11.436	12.300	11.233	14.240	16.499	19.842
9	11.978	12.488	13.021	13.579	14.776	16.085	17.518	20.799	25.802
10	13.816	14.487	15.193	15.937	17.549	19.337	21.321	25.959	33.253
11	15.784	16.645	17.560	18.531	20.655	23.045	25.733	32.150	42.566
12	17.888	18.977	20.141	21.384	24.133	27.271	30.850	39.581	54.208
13	20.141	21.495	22.953	24.523	28.029	32.089	36.786	48.497	68.760
14	22.550	24.215	26.019	27.975	32.393	37.581	43.672	59.196	86.949
15	25.129	27.152	29.361	31.772	37.280	43.842	51.660	72.035	109.687
16	27.888	30.324	33.003	35.950	42.753	50.980	60.925	87.442	138.109
17	30.840	33.750	36.974	40.545	48.884	59.118	71.673	105.931	173.636
18	33.999	37.450	41.301	45.599	55.750	68.394	84.141	128.117	218.045
19	37.379	41.446	46.018	51.159	63.440	78.969	98.603	154.740	273.556
20	40.995	45.762	51.160	57.275	72.052	91.025	115.380	186.688	342.945
25	63.249	73.106	84.701	98.347	133.334	181.871	249.214	471.981	1054.791
30	94.461	113.283	136.308	164.494	241.333	356.787	530.312	1181.882	3227.174
40	199.635	259.057	337.882	442.593	761.091	1342.025	2360.757	7343.858	30088.655
50	406.529	573.770	815.084	1163.909	2400.018	4994.521	10435.649	45497.191	280255.693

Present Value of $1
PV = 1/(1 + i)^n

Year	4%	5%	6%	7%	8%	9%	10%	11%	12%
1	0.9615	0.9523	0.9433	0.9345	0.9259	0.9174	0.9090	0.9009	0.8928
2	0.9245	0.9070	0.8899	0.8734	0.8573	0.8416	0.8264	0.8116	0.7971
3	0.8889	0.8638	0.8396	0.8163	0.7938	0.7721	0.7513	0.7311	0.7117
4	0.8548	0.8227	0.7920	0.7629	0.7350	0.7084	0.6830	0.6587	0.6355
5	0.8219	0.7835	0.7472	0.7130	0.6805	0.6499	0.6209	0.5934	0.5674
6	0.7903	0.7462	0.7049	0.6663	0.6301	0.5962	0.5644	0.5346	0.5066
7	0.7599	0.7106	0.6650	0.6227	0.5834	0.5470	0.5131	0.4817	0.4523
8	0.7306	0.6768	0.6274	0.5820	0.5402	0.5018	0.4665	0.4339	0.4038
9	0.7025	0.6446	0.5918	0.5439	0.5002	0.4604	0.4240	0.3909	0.3606
10	0.6755	0.6139	0.5583	0.5083	0.4631	0.4224	0.3855	0.3521	0.3219
11	0.6495	0.5846	0.5267	0.4751	0.4288	0.3875	0.3509	0.3172	0.2874
12	0.6245	0.5568	0.4969	0.4440	0.3971	0.3555	0.3186	0.2858	0.2566
13	0.6005	0.5303	0.4688	0.4150	0.3676	0.3262	0.2896	0.2575	0.2291
14	0.5774	0.5050	0.4423	0.3878	0.3404	0.2992	0.2633	0.2319	0.2046
15	0.5552	0.4810	0.4172	0.3624	0.3152	0.2745	0.2393	0.2090	0.1826
16	0.5339	0.4581	0.3936	0.3387	0.2918	0.2518	0.2176	0.1882	0.1631
17	0.5133	0.4362	0.3713	0.3166	0.2702	0.2310	0.1978	0.1696	0.1456
18	0.4936	0.4155	0.3503	0.2959	0.2502	0.2119	0.1798	0.1528	0.1300
19	0.4746	0.3957	0.3305	0.2765	0.2317	0.1944	0.1635	0.1376	0.1161
20	0.4563	0.3768	0.3118	0.2584	0.2145	0.1784	0.1486	0.1240	0.1036
25	0.3751	0.2953	0.2329	0.1842	0.1460	0.1159	0.0922	0.0736	0.0588
30	0.3083	0.2313	0.1741	0.1314	0.0993	0.0753	0.0573	0.0436	0.0333
35	0.2534	0.1812	0.1301	0.0936	0.0676	0.0489	0.0355	0.0259	0.0189
40	0.2082	0.1420	0.0972	0.0668	0.0460	0.0318	0.0220	0.0153	0.0107

Present Value of $1
PV = 1/(1 + i)^n

Yr.	13%	14%	15%	16%	17%	18%	19%	20%
1	0.8849	0.8771	0.8695	0.8620	0.8547	0.8474	0.8403	0.8333
2	0.7831	0.7694	0.7561	0.7431	0.7305	0.7181	0.7061	0.6944
3	0.6930	0.6749	0.6575	0.6406	0.6243	0.6086	0.5934	0.5787
4	0.6133	0.5920	0.5717	0.5522	0.5336	0.5157	0.4986	0.4822
5	0.5427	0.5193	0.4971	0.4761	0.4561	0.4371	0.4190	0.4018
6	0.4803	0.4555	0.4323	0.4104	0.3898	0.3704	0.3521	0.3348
7	0.4250	0.3996	0.3759	0.3538	0.3331	0.3139	0.2959	0.2790
8	0.3761	0.3505	0.3269	0.3050	0.2847	0.2660	0.2486	0.2325
9	0.3328	0.3075	0.2842	0.2629	0.2434	0.2254	0.2089	0.1938
10	0.2945	0.2697	0.2471	0.2266	0.2080	0.1910	0.1756	0.1615
11	0.2606	0.2366	0.2149	0.1954	0.1778	0.1619	0.1475	0.1345
12	0.2307	0.2075	0.1869	0.1684	0.1519	0.1372	0.1240	0.1121
13	0.2042	0.1820	0.1625	0.1452	0.1298	0.1162	0.1042	0.0934
14	0.1806	0.1597	0.1413	0.1251	0.1110	0.0985	0.0875	0.0778
15	0.1598	0.1400	0.1228	0.1079	0.0948	0.0835	0.0735	0.0649
16	0.1414	0.1228	0.1068	0.0930	0.0811	0.0707	0.0618	0.0540
17	0.1252	0.1077	0.0929	0.0802	0.0693	0.0599	0.0519	0.0450
18	0.1108	0.0946	0.0808	0.0691	0.0592	0.0508	0.0436	0.0375
19	0.0980	0.0829	0.0702	0.0596	0.0506	0.0430	0.0366	0.0313
20	0.0867	0.0728	0.0611	0.0513	0.0432	0.0365	0.0308	0.0260
25	0.0471	0.0378	0.0303	0.0244	0.0197	0.0159	0.0129	0.0104
30	0.0255	0.0196	0.0151	0.0116	0.0090	0.0069	0.0054	0.0042
35	0.0138	0.0101	0.0075	0.0055	0.0041	0.0030	0.0022	0.0016
40	0.0075	0.0052	0.0037	0.0026	0.0018	0.0013	0.0009	0.0006

Present Value of Annuity of $1

Year	4%	5%	6%	7%	8%	9%	10%	11%	12%
1	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.9009	0.8929
2	1.8861	1.8594	1.8334	1.8080	1.7833	1.7591	1.7355	1.7125	1.6901
3	2.7751	2.7232	2.6730	2.6243	2.5771	2.5313	2.4868	2.4437	2.4018
4	3.6299	3.5459	3.4651	3.3872	3.3121	3.2397	3.1699	3.1024	3.0373
5	4.4518	4.3295	4.2124	4.1002	3.9927	3.8896	3.7908	3.6959	3.6048
6	5.2421	5.0757	4.9173	4.7665	4.6229	4.4859	4.3553	4.2305	4.1114
7	6.0020	5.7864	5.5824	5.3893	5.2064	5.0329	4.8684	4.7122	4.5638
8	6.7327	6.4632	6.2098	5.9713	5.7466	5.5348	5.3349	5.1461	4.9676
9	7.4353	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590	5.5370	5.3282
10	8.1109	7.7217	7.3601	7.0236	6.7101	6.4177	6.1446	5.8892	5.6502
11	8.7605	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	6.2065	5.9377
12	9.3851	8.8632	8.3838	7.9427	7.5361	7.1607	6.8137	6.4924	6.1944
13	9.9856	9.3936	8.8527	8.3576	7.9038	7.4869	7.1034	6.7499	6.4235
14	10.5631	9.8986	9.2950	8.7455	8.2442	7.7862	7.3667	6.9819	6.6282
15	11.1184	10.3797	9.7122	9.1079	8.5595	8.0607	7.6061	7.1909	6.8109
16	11.6523	10.8378	10.1059	9.4467	8.8514	8.3126	7.8237	7.3792	6.9740
17	12.1657	11.2741	10.4773	9.7632	9.1216	8.5436	8.0216	7.5488	7.1196
18	12.6593	11.6896	10.8276	10.0591	9.3719	8.7556	8.2014	7.7016	7.2497
19	13.1339	12.0853	11.1581	10.3356	9.6036	8.9501	8.3649	7.8393	7.3658
20	13.5903	12.4622	11.4699	10.5940	9.8181	9.1285	8.5135	7.9633	7.4694
25	15.6221	14.0939	12.7834	11.6536	10.6748	9.8226	9.0770	8.4217	7.8431
30	17.2920	15.3724	13.7648	12.4090	11.2578	10.2736	9.4269	8.6938	8.0552
35	18.6646	16.3742	14.4982	12.9477	11.6546	10.5668	9.6442	8.8552	8.1755
40	19.7928	17.1591	15.0463	13.3317	11.9246	10.7574	9.7790	8.9511	8.2438

Present Value of Annuity of $1

Yr.	13%	14%	15%	16%	17%	18%	19%	20%
1	0.8850	0.8772	0.8696	0.8621	0.8547	0.8475	0.8403	0.8333
2	1.6681	1.6467	1.6257	1.6052	1.5852	1.5656	1.5465	1.5278
3	2.3611	2.3216	2.2832	2.2459	2.2096	2.1743	2.1399	2.1065
4	2.9745	2.9137	2.8549	2.7982	2.7432	2.6901	2.6386	2.5887
5	3.5172	3.4331	3.3522	3.2743	3.1993	3.1272	3.0576	2.9906
6	3.9975	3.8887	3.7845	3.6847	3.5892	3.4976	3.4098	3.3255
7	4.4226	4.2883	4.1604	4.0386	3.9224	3.8115	3.7057	3.6046
8	4.7988	4.6389	4.4873	4.3436	4.2072	4.0776	3.9544	3.8372
9	5.1317	4.9464	4.7716	4.6065	4.4506	4.3030	4.1633	4.0310
10	5.4262	5.2161	5.0188	4.8332	4.6586	4.4941	4.3389	4.1925
11	5.6869	5.4527	5.2337	5.0286	4.8364	4.6560	4.4865	4.3271
12	5.9176	5.6603	5.4206	5.1971	4.9884	4.7932	4.6105	4.4392
13	6.1218	5.8424	5.5831	5.3423	5.1183	4.9095	4.7147	4.5327
14	6.3025	6.0021	5.7245	5.4675	5.2293	5.0081	4.8023	4.6106
15	6.4624	6.1422	5.8474	5.5754	5.3242	5.0916	4.8759	4.6755
16	6.6039	6.2651	5.9542	5.6685	5.4053	5.1624	4.9377	4.7296
17	6.7291	6.3729	6.0472	5.7487	5.4746	5.2223	4.9897	4.7746
18	6.8399	6.5504	6.1280	5.8178	5.5339	5.2732	5.0333	4.8122
19	6.9380	6.6231	6.1982	5.8774	5.5845	5.3162	5.0700	4.8435
20	7.0248	6.6869	6.2593	5.9288	5.6278	5.3527	5.1009	4.8696
25	7.3300	6.8729	6.4641	6.0971	5.7662	5.4669	5.1951	4.9476
30	7.4956	7.0027	6.5660	6.1772	5.8294	5.5168	5.2346	4.9789
35	7.5856	7.0700	6.6166	6.2153	5.8582	5.5386	5.2512	4.9915
40	7.6344	7.1050	6.6418	6.2335	5.8713	5.5481	5.2581	4.9966

Annual Amortization Table

Year	4%	5%	6%	7%	8%	9%	10%	11%	12%
1	1.0400	1.0500	1.0600	1.0700	1.0800	1.0900	1.1000	1.1100	1.1200
2	0.5301	0.5378	0.5454	0.5530	0.5607	0.5684	0.5761	0.5839	0.5916
3	0.3603	0.3672	0.3741	0.3810	0.3880	0.3950	0.4021	0.4092	0.4163
4	0.2754	0.2820	0.2885	0.2952	0.3019	0.3086	0.3154	0.3223	0.3292
5	0.2246	0.2309	0.2373	0.2438	0.2504	0.2570	0.2637	0.2705	0.2774
6	0.1907	0.1970	0.2033	0.2097	0.2163	0.2229	0.2296	0.2363	0.2432
7	0.1666	0.1728	0.1791	0.1855	0.1920	0.1986	0.2054	0.2122	0.2191
8	0.1485	0.1547	0.1610	0.1674	0.1740	0.1806	0.1874	0.1943	0.2013
9	0.1344	0.1406	0.1470	0.1534	0.1600	0.1667	0.1736	0.1806	0.1876
10	0.1232	0.1295	0.1358	0.1423	0.1490	0.1558	0.1627	0.1698	0.1769
11	0.1141	0.1203	0.1267	0.1333	0.1400	0.1469	0.1539	0.1611	0.1684
12	0.1065	0.1128	0.1192	0.1259	0.1326	0.1396	0.1467	0.1540	0.1614
13	0.1001	0.1064	0.1129	0.1196	0.1265	0.1335	0.1407	0.1481	0.1556
14	0.0946	0.1010	0.1075	0.1143	0.1212	0.1284	0.1357	0.1432	0.1508
15	0.0899	0.0963	0.1029	0.1097	0.1168	0.1240	0.1314	0.1390	0.1468
16	0.0858	0.0922	0.0989	0.1058	0.1129	0.1203	0.1278	0.1355	0.1433
17	0.0821	0.0886	0.0954	0.1024	0.1096	0.1170	0.1246	0.1324	0.1404
18	0.0789	0.0855	0.0923	0.0994	0.1067	0.1142	0.1219	0.1298	0.1379
19	0.0761	0.0827	0.0896	0.0967	0.1041	0.1117	0.1195	0.1275	0.1357
20	0.0735	0.0802	0.0871	0.0943	0.1018	0.1095	0.1174	0.1255	0.1338
25	0.0640	0.0709	0.0782	0.0858	0.0936	0.1018	0.1101	0.1187	0.1275
30	0.0578	0.0650	0.0726	0.0805	0.0888	0.0973	0.1060	0.1150	0.1241
35	0.0535	0.0610	0.0689	0.0772	0.0858	0.0946	0.1036	0.1129	0.1223
40	0.0505	0.0505	0.0664	0.0750	0.0838	0.0929	0.1022	0.1117	0.1213

Annual Amortization Table

Yr.	13%	14%	15%	16%	17%	18%	19%	20%
1	1.1300	1.1400	1.1500	1.1600	1.1700	1.1800	1.1900	1.2000
2	0.5994	0.6072	0.6151	0.6229	0.6308	0.6387	0.6466	0.6545
3	0.4235	0.4307	0.4379	0.4452	0.4525	0.4599	0.4673	0.4747
4	0.3361	0.3432	0.3502	0.3573	0.3645	0.3717	0.3789	0.3862
5	0.2843	0.2912	0.2983	0.3054	0.3125	0.3197	0.3270	0.3343
6	0.2501	0.2571	0.2642	0.2713	0.2786	0.2859	0.2932	0.3007
7	0.2261	0.2331	0.2403	0.2476	0.2549	0.2623	0.2698	0.2774
8	0.2083	0.2155	0.2228	0.2302	0.2376	0.2452	0.2528	0.2606
9	0.1948	0.2021	0.2095	0.2170	0.2246	0.2323	0.2401	0.2480
10	0.1842	0.1917	0.1992	0.2069	0.2146	0.2225	0.2304	0.2385
11	0.1758	0.1833	0.1910	0.1988	0.2067	0.2147	0.2228	0.2311
12	0.1689	0.1766	0.1844	0.1924	0.2004	0.2086	0.2168	0.2252
13	0.1633	0.1711	0.1791	0.1871	0.1953	0.2036	0.2121	0.2206
14	0.1586	0.1666	0.1746	0.1828	0.1912	0.1996	0.2082	0.2168
15	0.1547	0.1628	0.1710	0.1793	0.1878	0.1964	0.2050	0.2138
16	0.1514	0.1596	0.1679	0.1764	0.1850	0.1937	0.2025	0.2114
17	0.1486	0.1569	0.1653	0.1739	0.1826	0.1914	0.2004	0.2094
18	0.1462	0.1546	0.1631	0.1718	0.1807	0.1896	0.1986	0.2078
19	0.1441	0.1526	0.1613	0.1701	0.1790	0.1881	0.1972	0.2064
20	0.1423	0.1509	0.1597	0.1686	0.1776	0.1862	0.1960	0.2053
25	0.1364	0.1454	0.1546	0.1640	0.1734	0.1829	0.1924	0.2021
30	0.1334	0.1428	0.1523	0.1618	0.1715	0.1812	0.1910	0.2008
35	0.1318	0.1414	0.1511	0.1608	0.1707	0.1805	0.1904	0.2003
40	0.1309	0.1407	0.1505	0.1604	0.1703	0.1802	0.1901	0.2001

MISSOURI AGRICULTURAL EDUCATION

FARM BUSINESS MANAGEMENT ANALYSIS

ADMINISTRATIVE GUIDELINES

Revised 1993

In cooperation with
Agricultural Education
Department of Practical Arts
and Vocational-Technical Education
College of Education and College of Agriculture
University of Missouri-Columbia

In cooperation with
Agricultural Education Section
Division of Vocational and Adult Education
Department of
Elementary and Secondary Education
Jefferson City, Missouri

BEST COPY AVAILABLE

The activity which is the subject of this report was supported in whole or in part by funds from the Department of Elementary and Secondary Education, Division of Vocational and Adult Education. However, the opinions expressed herein do not necessarily reflect the position or policies of the Missouri Department of Elementary and Secondary Education or the Division of Vocational and Adult Education, and no official endorsement should be inferred.

ADMINISTRATIVE GUIDELINES

FOR

FARM BUSINESS MANAGEMENT ANALYSIS

A PHASE OF THE ADULT PROGRAM

OF VOCATIONAL AGRICULTURE IN MISSOURI

Original by:

Robert Denker
Bob R. Stewart
November 1980

Revised by:

Jim Riley
April 1993

TABLE OF CONTENTS

Overview
- Introduction 1
- Instruction 5
- Instructional Units 6
- Instructional Approach 7

Minimum Standards
- Operation of the FBMA Phase of the Total Adult Program 9
- Minimum Standards for Missouri Adult Vocational Agriculture Education Programs 10
- Regulations in Fulfilling the Missouri Standards for Adult Education in Vocational Agriculture 11

Establishing an FBMA Program
- Teacher Requirements 17
- Starting a New FBMA Program 17
- Developing Enrollment 21
- Planning the Instructor's Schedule 22
- Facilities 26
- Maintaining Files 26
- Public Relations and Member Communications 27
- Evaluating FBMA 30
- Miscellaneous Suggestions 30

OVERVIEW

Introduction

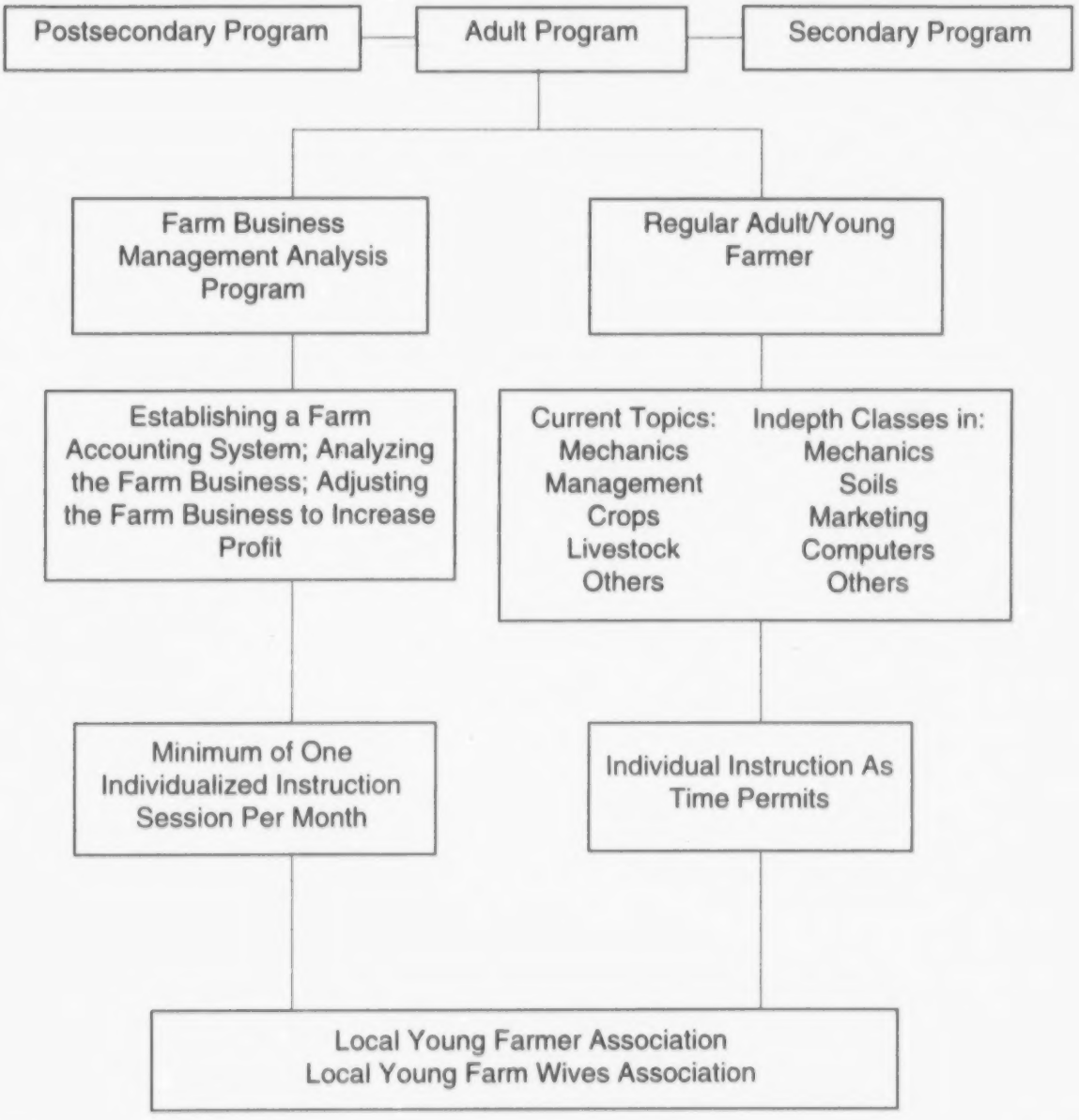
Agriculture is one of the nation's largest and most important industries. American farmers produce most of the food and fiber needed for our expanding population and annually export a substantial amount to other countries. The ability to meet these needs efficiently and economically will have a great impact on our citizens as consumers and on improving our balance of trade with other countries.

The Smith-Hughes Act of 1917 provided funding on a matching basis with the states for the purpose of promoting vocational agricultural education for present and prospective farmers in the public schools. Subsequent vocational acts have placed additional emphasis on vocational agricultural education for young farmer and adult students. Historically, state and federal monies have provided a substantial part of the funding of salaries for teachers of adults in vocational agriculture. In Missouri, many local school districts have provided their share of funding for adult programs as an investment in their own futures, as the communities that support the local schools are dependent upon prosperous agriculture. Local funding is permissive in accordance with State Statute 171091, which states, "Local districts may provide gratuitous education for individuals 21 years of age and older."

Great advances in the science and technology of farming have occurred during the past twenty years. More progress has been made in the productivity per farmer since 1940 than in all of recorded history. Change in the area of financial management has not kept pace. Rewards for good financial management are not received immediately and, thus, change is more gradual and over a longer period of time. Indeed, farming has become and will continue to be a complex business requiring the use of technology and economic and management information. Because of the complexity involved in farming, there exists a continual need for educational training.

In order to meet the needs of the young/adult farmers in the state of Missouri in the area of financial management and analysis of financial records, the Farm Business Management Analysis (FBMA) program has been developed. The relationship this program has with other existing phases of the total vocational agriculture adult program is outlined in the following chart for full-time adult teachers, part-time adult teachers and single teacher departments.

RESPONSIBILITIES OF TEACHERS FOR ADULT/YOUNG FARMER EDUCATION


Postsecondary Program
Adult Program
Secondary Program
Farm Business Management Analysis Program
Regular Adult/Young Farmer
Establishing a Farm Accounting System; Analyzing the Farm Business; Adjusting the Farm Business to Increase Profit
Current Topics: Mechanics Management Crops Livestock Others
Indepth Classes in: Mechanics Soils Marketing Computers Others
Minimum of One Individualized Instruction Session Per Month
Individual Instruction As Time Permits
Local Young Farmer Association
Local Young Farm Wives Association

Full-time teachers and part-time teachers of adults are expected to provide regularly scheduled individualized instruction for a core group.

Teachers conducting the FBMA Program fit one of the following categories relative to the amount of time devoted to conducting the program:

1. Teachers in a multi-teacher department devoting 100 percent of their time to an adult program;
2. Teachers in a single- or multi-teacher department devoting between 25 and 75 percent of their time to an adult program; or
3. Teachers in a single-teacher department providing this type of instruction for one to three couples. The time spent is in addition to the secondary program.

Instruction

The FBMA Program, designed to be a portion of a total adult program, consists of three years of intensified instruction. Teachers of vocational agriculture work with a selected group of farm families, both in the classroom and on their farms. Instruction after the third year is less intensified, and less time is spent with each individual farmer.

The first year of instruction deals with the development of a complete set of farm records for summary and analysis. Instruction during the second year involves the analysis and interpretation of the farm records kept during the first year. The third year of instruction is comprised of farm planning and reorganization based on the analysis of records made during the first two years. Instruction following the third year consists of updating the farmer in selected areas and continuing farm planning and reorganization.

Unit titles for the four years are: Establishing a Farm Accounting System, first year; Analyzing the Farm Business, second year; Adjusting the Farm Business to Increase Profit, third year; and Advanced Farm Business Management, fourth year and beyond.

Instructional Units

The FBMA program is composed of the following instructional units.

Unit I--Establishing a Farm Accounting System

Lesson	Title
1	Orientation to the Farm Business Management Analysis Program
2	Introduction to Keeping Records
3	Recording Receipts and Expenditures
4	Planning the Year's Cash Flow
5	Developing Inventories of Machinery
6	Developing Inventories of Livestock and of Crops and Supplies
7	Developing an Investment Record for Real Estate
8	Keeping Enterprise Records
9	Completing Farm Support Records
10	Using the Concept of Time Value in Planning

Unit II--Analyzing the Farm Business

Lesson	Title
1	Minimizing This Year's Taxable Income
2	Summarizing the Year's Records
3	Methods of Tax Management
4	Planning Next Year's Livestock and Cropping Programs and Cash Flow
5	Analyzing the Profit/Loss Statement
6	Analyzing the Financial Statement and Cash Flow
7	Analyzing Livestock Enterprises
8	Analyzing Crop Enterprises
9	Analyzing Machinery, Equipment, and Building Costs
10	Utilizing Farm Credit

Unit III--Adjusting the Farm Business to Increase Profit

Lesson	Title
1	Determining the Most Profitable Cropping System
2	Planning Income Tax Management
3	Closing the Record Book
4	Planning This Year's Cash Flow
5	Analyzing the Farm Business
6	Lowering Operating Costs
7	Reducing Overhead Costs
8	Determining the Most Profitable Livestock System
9	Adjusting Capital Investments to Increase Net Profit
10	Increasing Labor Efficiency

Instructional Approach

The FBMA lessons have been prepared using a standard format for adult materials. Teachers enrolled in F444 at Mount Vernon, Summer 1979, developed the basic format for teaching adults. Cooperation among teachers, university staff and state staff has resulted in the following approaches, suggested for use as a general procedure for teaching adults.

The format of FBMA lessons is as follows:

Unit (Title of Unit)

Lesson (Title of Lesson)

A. Review (review key points of previous session)
B. Objective (objective of the lesson)
C. Motivation (utilize interesting information and past experiences of class members to initiate discussion of the topic)
D. Key Points (appropriate points regarding the objective of the lesson)
E. Introduction of Information (factual information pertinent to accomplishment of the objective)
F. Discussion (incorporate application of the new information)
G. Conclusions (offer guidelines based on lesson for class members to use)

Other sections included in the format that are not a direct part of the actual classroom instruction procedure include:

Announcements

Social

Individual Instruction (suggestions for key points related to the lesson to be discussed on visits)

Materials (the shopping list of transparencies, handouts, etc., needed for successful completion of the lesson as it is written)

MINIMUM STANDARDS

Operation of the FBMA Phase of the Total Adult Program

Minimum state standards for funded adult programs were established, specified in DESE Standards for Adult Programs and put into effect in July 1983. The main purpose and intent of the standards is to ensure that the three components of a funded adult program, namely Farm Business Management Analysis, Classroom Instruction, and Young Farmers Education/Leadership Programs are in place and in balance with each other.

Guidelines for evaluating and certifying the fulfillment of the standard for each component have been developed and are summarized in the following information. In late March of each forthcoming year, your adult program will be certified as to the level of compliance met during the current year. The state adult reimbursement for your school for the next year will then be determined on the basis of that compliance percentage. In other words, 1993-94 reimbursement will be based on your 1992-93 adult activity.

Minimum Standards for Missouri Adult Vocational Agriculture Education Programs

I. Each program will include a Farm Business Management Analysis (FBMA) program.

A. Enrollment will be based on time assigned to adult work, with 20 farm units enrolled for a full-time instructor, 13 for two-thirds time assignment, 10 for one-half time assignment, and 6 for one-third time assignment.

B. Establish a farm accounting system with each enrollee to:

1. Analyze the farm business.
2. Adjust the farm business to increase profit.

C. Conduct a minimum of one individualized instruction session per month per enrollee during the three-year program. After completing the three-year program, instruction as needed.

D. Analyze each unit's farm business records at the end of the year.

II. Each program will include Classroom Instruction in the following areas:

A. Instructor conduct at least one In-Depth Class per year.

EXAMPLES: Ag Mechanics, Soils, Marketing, Welding

(Based on 30 total hours of instruction for full-time assignment; 20 hours for two-thirds assignment; 15 hours for one-half time assignment; and 10 hours for one-third time assignment.)

B. Instructor conduct at least 10 class sessions per year for the Farm Business Management Analysis (FBMA) group.

C. Young Farmers will coordinate and set up current topics classes.

III. Each program will provide leadership development activities through a Young Farmers organization.

A. Young Farmers will be encouraged to participate in district, state, and national activities.

EXAMPLES: District Tour & Banquet, State Tour & Convention, National Institute

Regulations in Fulfilling the Minimum Standards For Missouri Adult Vocational Agriculture Education Programs

1. The purpose of these regulations is to define and explain any issues relating to the implementation of the Minimum Standards for Missouri Adult Vocational Agriculture Programs.

2. Table I breaks down the time allocation of the three components of a full-time adult program. Part-time programs will consist of the same three components, but on a lesser scale.

3. Table II describes in table form the requirements in terms of numbers of analyses required, hours of Classroom Instruction required, hours devoted to Young Farmers organizational/educational activities, and the respective percentage weights for figuring state salary reimbursement.

4. Programs approved under old standards may use farm business analyses other than the Missouri FBMA analysis if approved by the State FBMA Coordinator and the State Adult Coordinator (DESE). Programs approved and expanded for the 1984 fiscal year and after (July 1, 1983, to June 30, 1984) must use the Missouri FBMA analysis. In addition, when a teacher change occurs after April 1985, the program must convert to the Missouri FBMA analysis.

5. The adult MVATA teachers committee, State FBMA Coordinator, and State Adult Coordinator (DESE) will meet and write a specific analysis format to which any alternative analysis system will have to conform and report. The format will be as compatible as possible with the Missouri FBMA analysis in place.

   All schools will report each farm in the approved format on an individual basis to the State FBMA Coordinator by March 15. Names will not be required past the local level. However, a DESE supervisor will be able to verify FBMA enrollment with the local instructor at any time.

6. The FBMA standard will be certified by the State FBMA Coordinator as to the number of approved analyses (including alternatives) completed for the year. All approved adult programs will support and maintain the work and activities of the State FBMA coordinator through a fee structure. The State FBMA Coordinator will be in charge of conducting workshops and teaching classes, collecting and summarizing analyses for all enrollees in the state, writing curriculum and support materials, and serving as a resource person for all FBMA instructors in Missouri.

7. The Classroom Instruction and Young Farmers standards will be certified by the vocational agriculture supervisory staff. The Annual Report of Vocational Agriculture (VA-5) and supervisory visits will be the basis for determination.

8. Programs will be certified each year by March 20. Adult reimbursements will be affected in the following fiscal year (July 1-June 30); (i.e., next year's reimbursement will be dependent on this year's activity). The amount of reimbursement available in the upcoming year will be figured by multiplying the level of standard fulfillment in percentage by the maximum level of adult reimbursement available for the position (see Table III).

9. Letters of program approval specifying the amount reimbursable for the upcoming year will be sent to the school administrator in charge and the vocational agriculture instructor by March 25.

10. If approved by the DESE supervisor, a program that is undergoing a change of instructor would be fully reimbursed the first year for the new instructor regardless of past history.

11. The intent of the state standards and regulations for adult education in vocational agriculture is to ensure that the three components of the program (FBMA, In-Depth Classes, Young Farmers) are in place and in balance in the local school. The attempt herein is to support that balance with a consistent reimbursement policy that will encourage the proper mix. Even though the formula is based on partial reimbursements, absence or continual neglect of one component of the program will result in elimination of all reimbursement.

TABLE I
FULL-TIME VOCATIONAL AGRICULTURE ADULT INSTRUCTORS' SUGGESTED TIME GUIDELINES

I.	FBMA	
	A. Visits - 20 enrollees X 10 visits = 200 visits X 2 3/4 hours each =	550 hrs.
	B. Visit preparation - 200 visits X 2 hours =	400 hrs.
	C. *Other activities =	50 hrs.
		1000 hrs. (50%)
II.	Classroom Instruction	
	A. 30 hours of In-Depth instruction or 10 to 20 class sessions =	30 hrs.
	B. Preparation for In-Depth Classes - 5 hours' preparation per hour of instruction =	150 hrs.
	C. FBMA classes - 20 per year X 3 1/2 hours =	70 hrs.
	D. FBMA class preparation - 20 X 4 hours =	80 hrs.
	E. Young Farmer topic classes - both groups - 20 sessions X 3 hours =	60 hrs.
	F. Young Farmer topic class preparations - 20 sessions X 3 hours =	60 hrs.
	G. Individual visits with enrollees arising out of class problems - 40 visits X 2 3/4 hours each =	110 hrs.
	H. Individual visit preparation - 40 visits X 2 hours =	80 hrs.
	I. *Other Activities =	60 hrs.
		700 hrs. (35%)
III.	Young Farmers	
	A. **District meetings - one winter, one summer =	16 hrs.
	B. **State convention - 3 days + 3 days' overhead =	48 hrs.
	C. **State summer tour - 3 days + 3 days' overhead =	48 hrs.
	D. National Institute - 3 days + 3 days' overhead =	48 hrs.
	E. Social activities - 3 activities =	30 hrs.
	F. Fund raising =	40 hrs.
	G. *Other activities =	70 hrs.
		300 hrs. (15%)
TOTAL		2000 hrs. (100%)
	*Other activities	
	MVA Summer Conference - 4 days =	32 hrs.
	Fall adult teachers' meeting - 2 days =	16 hrs.
	Teacher committees - local school and vocational agriculture - 4 days =	32 hrs.
	FBMA workshops - 4 workshops X 6 hours =	24 hrs.
	District teachers' meetings - 1 1/2 days =	12 hrs.
	Area teachers' meetings - 6 meetings X 4 hours =	24 hrs.
	Professional improvement activities - 5 days =	40 hrs.
		180 hrs.

**These activities in addition to those at the local level are considered most important in terms of the total Young Farmers/Wives program.

TABLE II
CHARACTERISTICS OF PERCENT-TIME ASSIGNMENTS IN ADULT EDUCATION PROGRAMS

Percent Adult Assignment	Maximum/ Minimum Periods of Secondary Classes Approvable	FBMA Requirements as Certified by Analysis	Classroom Instruction - Minimum Hours of Instruction Including Preparation	Young Farmers/Young Farm Wives - Hours Leadership Educational Activities	Hours Per Year Devoted to Adult Instruction	Percentage Weights for Figuring State Reimbursement
full time	0 / 0	20 units	700	300	2,000	50% FBMA 35% Classroom 15% Y.F.
2/3 time	2 / 1	13 units	467	250	1,334	47% FBMA 35% Classroom 18% Y.F.
1/2 time	3 / 2	10 units	350	200	1,000	45% FBMA 35% Classroom 20% Y.F.
1/3 time	4 / 3	6 units	233	150	666	43% FBMA 35% Classroom 22% Y.F.
1/6 time	5 / 4	3 units	117	100	333	35% FBMA 35% Classroom 30% Y.F.

TABLE III
EXAMPLES IN FIGURING ADULT REIMBURSEMENT

Example 1 - Teacher A is a 50-percent time (1/2 time) adult teacher. On March 20, 1993, it was determined that he had completed 11 farm analyses, a 15-hour In-Depth Class, 10 FBMA classes, and an active Young Farmer series of educational topics classes as well as active participation in district and state activities. Teacher A's salary for the coming year is $23,600. The adult reimbursement for teacher A would be figured as follows:

I. **FBMA**

# of FBMA Analyses for Record Year ÷ # required by instructor = *100% x FBMA Emphasis (45%) = 45 % FBMA Compliance

Example: 11 ÷ 10 = *100 x 45% = 45% of FBMA Compliance

II. Classroom Instruction

****Hours of Classroom Instruction ÷ **Required hours of Classroom Instruction by instructor = *100% x FBMA Emphasis (35%) = 35 % Classroom Compliance**

****including preparation time and associated individual visits.**

Example: 350 ÷ 350 = *100 x 35% = 35% Classroom Compliance

III. Young Farmers Educational/Leadership Activities

Completion of an adequate level of educational and leadership activities on all levels = * 100% 100 x 20% = 20 % Young Farmer Compliance

Example: 100 x 20% = 20% Young Farmer Compliance

Summary

45 % FBMA Compliance + 35 % Classroom Compliance + 20 % Young Farmer Compliance = 100 % Total Compliance in 1992-93.

$ 23,600 total salary x 50 % time adult assignment x 70% (applicable adult rate) = $8,260 maximum eligible adult reimbursement.

100 % total compliance x maximum eligible adult reimbursement of $ 8,260 = $ 8,260 adult reimbursement available for your school for Fiscal Year 1993, based on current year's activity.

*** 100% maximum**

Example 2 - Assume the same situation as in Example 1 except that the teacher completed only 4 farm analyses and a 12-hour In-Depth Class. The adult reimbursement would then be figured as follows:

I. **FBMA**

# of FBMA Analyses for Record Year ÷ # required by instructor = *100% x FBMA Emphasis (45%) = 45 % FBMA Compliance

Example: 4 ÷ 10 = 40 x 45% = 18% of FBMA Compliance

II. Classroom Instruction

****Hours of Classroom Instruction ÷ **Required hours of Classroom Instruction by instructor = *100% x FBMA Emphasis (35%) = 35 % Classroom Compliance**

****including preparation time and associated individual visits.**

Example: 278 ÷ 350 = *79 x 35% = 27% Classroom Compliance

III. Young Farmers Educational/Leadership Activities

Completion of an adequate level of educational and leadership activities on all levels = * 100% 100 x 20% = 20 % Young Farmer Compliance

Example: 100 x 20% = 20% Young Farmer Compliance

Summary

18 % FBMA Compliance + 27 % Classroom Compliance + 20 % Young Farmer Compliance = 65 % Total Compliance in 1992-93.

$ 23,600 total salary x 50 % time adult assignment x 70% (applicable adult rate) = $8,260 maximum eligible adult reimbursement.

65 % total compliance x maximum eligible adult reimbursement of $ 8,260 = $ 5,369 adult reimbursement available for your school for Fiscal Year 1993, based on current year's activity.

*** 100% maximum**

Establishing an FBMA Program

Teacher Requirements

Teacher requirements are in accordance with the guidelines for certification developed by the Department of Elementary and Secondary Education. Furthermore, teachers should possess a thorough understanding of basic accounting principles and farm management procedures. Participation in a series of inservice workshops concerning the FBMA program is also a prerequisite.

Starting a New FBMA Program

Before beginning the FBMA program, the local school district must recognize the need for and the role of FBMA instruction in their present adult education program. Educating district personnel in these regards may become the responsibility of the prospective instructor. Benefits to the community and benefits to individual enrollees are listed below. These ideas should help justify the initiation of the FBMA adult program in the local community.

BENEFITS TO THE COMMUNITY FROM FBMA

1. Education of adults fulfills a public responsibility/service.
2. Economic returns to the community could increase with respect to better overall management of individual farms. (One state reported an approximate $9 increase in business for each $1 spent on the program.)
3. The development of a consciousness among adults regarding civic responsibilities is enhanced.
4. Adult classes encourage more individuals to participate in community activities.
5. The teaching and technical skills of the teacher are improved, which could create a positive impact on the secondary program.
6. Adults perceive the school to be the active educational center as a result of participating in adult classes and, thus, often increase personal interest and financial support for the school.
7. FBMA will encourage farmers to improve their farm business. (One study showed the average farmer received a $4.20 increase in income per $1 spent on the program.)

8. Enrollees benefit from sharing agricultural practices and experiences.

9. School facility utilization is increased.

10. The community's awareness of agricultural management practices is increased.

BENEFITS TO THE FBMA ENROLLEE

1. Ten class sessions are provided.

2. Ten individual meetings are provided.

3. Assistance with summarizing and interpreting farm business records is provided.

4. Computer analysis and instructional review of individual business records is provided.

5. Assistance with developing and working to attain specified family and farm goals is provided.

6. The opportunity to use the instructor as a resource person is provided.

7. Simultaneous enrollment with spouse/partners, etc., is available.

8. A full three-year sequence of courses is available.

9. Membership in the Young Farmer/Young Farm Wives associations is available.

10. Protection of confidentiality is planned for and encouraged.

11. Knowledge and practical experience using the Missouri Farm Business Record Book and the FBMA accounting system is gained.

Local school districts with a full-time or part-time adult teacher should coordinate efforts toward implementation with the Missouri Department of Elementary and Secondary Education (DESE). Full-time secondary teachers must have prior approval from DESE each year before operating an FBMA phase of the adult program.

Incorporating the FBMA program into an existing adult program will require planning. The instructor should keep in mind that FBMA has a close relationship

with the total adult/young farmer program (see the chart on page 3). Therefore, the instructor who wants to start FBMA and already operates a regular adult/young farmer program has to decide how the process of building enrollment will be managed. For example, the FBMA participants can be drawn from the local adult population at-large, the current enrollment in the regular adult/young farmer program or a combination of both.

The instructor must also decide which unit or units of FBMA to teach. The goal should be to make the transition into the four-year FBMA series run as smoothly as possible. One instructor may want to start the FBMA series in sequence by only offering Unit I--Establishing a Farm Accounting System the first year. Then, as each group progresses, the entire four units series is in progress after the third year of operation. Another instructor may have individuals from the regular adult/young farmer program who are ready to start with Unit II--Analyzing the Farm Business. Therefore, two separate sessions for Units I and II are in operation the initial year.

So that all enrollees and instructors generally understand what the outcomes of the FBMA program are, the "Mutual Understanding" form has been included on page 20. This is neither a contract, nor a binding agreement. It is merely a document indicating that both the instructor and the enrollee understand the basic responsibilities pertaining to participation in the FBMA program.

FARM BUSINESS MANAGEMENT ANALYSIS PROGRAM
MUTUAL UNDERSTANDING*

In order to clarify responsibilities of both the Farm Business Management Analysis (FBMA) program enrollees and instructor, the following statements have been reviewed.

The responsibilities of the instructor are to:

1. Organize and conduct 10 class sessions in addition to other adult/young farmer classes.
2. Schedule and conduct one individual meeting per month for 10 months with each enrollee at a mutually agreeable time.
3. Assist in summarizing farm business records at the end of the year.
4. Have records analyzed by computer and review with enrollees.
5. ***Maintain confidentiality.***
6. Assist enrollees in working to attain specified goals.
7. Collect fees and maintain records of deposition of those fees.
8. Serve as a resource person in securing and providing information on related subjects.

The responsibilities of the enrollees are to:

1. Attend class sessions regularly.
2. Be available for the scheduled individual instruction periods or contact instructor to reschedule.
3. Pay fees of $_____ on or before _____.
4. Maintain records using the Missouri Farm Business Record Book and FBMA accounting system.
5. Actively participate in class.
6. Be a member of Missouri Young Farmers/Young Farm Wives.
7. Establish family and farm business goals.
8. Plan to participate for a minimum of three years.
9. Evaluate the FBMA program at least annually to provide the instructor with constructive suggestions/criticisms.

We have reviewed the above statements and would like to participate in the Farm Business Management and Analysis Program.

*This is for the purpose of communication and is not intended to serve as a binding agreement or contract.

_____ Date

_____ Enrollee

_____ Instructor

Developing Enrollment

Teachers need to be highly selective in securing enrollment for the FBMA program. Enrollees must want to improve and increase the efficiency of their farm businesses if worthwhile instruction in FBMA is to result. Following is a list of characteristics suggested for prospective enrollees.

1. The enrollee should be able to benefit from the FBMA class by:

    a. performing managerial functions in the farm business;
    b. being goal oriented;
    c. being change oriented;
    d. enrolling simultaneously with spouse, partner, etc.

2. The enrollee should be able to contribute to the FBMA class by being:

    a. willing to share personal ideas, examples, and experiences;
    b. able to regularly attend class.

3. The enrollee should be willing to actively participate in the FBMA class by:

    a. keeping and analyzing records;
    b. using the Missouri Farm Business Record Book;
    c. using the FBMA analysis system;
    d. paying fees;
    e. scheduling individual meetings mutually agreeable with the instructor;
    f. holding active or associate membership in the YF/YFW associations.

During the recruitment phase, teachers should make a personal contact with prospective enrollees to explain the purpose and objectives of the FBMA program and the possible advantages and outcomes to them should they decide to enroll. All enrollees will be required to keep a complete set of farm records and should be willing to share, on a strictly confidential basis, their financial records with the teacher. Farmers enrolled in the program should be encouraged to use the Missouri Farm Business Record Book, although other complete accounting systems may be used.

All persons either already involved in or planning to become involved in the decision-making process of a farming operation should be enrolled in FBMA. This means that individuals, partners, couples, etc., may enroll.

Enrollees should be interested in attending the entire course. Instruction in FBMA is designed for three years to be of maximum benefit to enrollees. Three years are necessary to obtain meaningful measures of performance for individual farm units.

Planning the Instructor's Schedule

Teachers of adults schedule their time between group classes, individualized instruction and planning time in the office. Group classes are generally conducted at night. A balance of individualized instruction and planning time is maintained during the day.

The adult instructor of FBMA, whether full-time or part-time, has many responsibilities. Therefore, to more effectively manage time allowances for instructional planning, class sessions, visitations, etc., it is suggested that a monthly schedule like the one on page 23 be developed. This procedure will help prevent missing important dates while at the same time getting time allotted for all important responsibilities.

The monthly schedule should be developed as accurately as possible. This will prevent "double dating" in terms of conflicting events. Besides being accurate, the schedule should be flexible. Avoid developing such a rigid schedule that minor changes disrupt a major portion of events. It may be interesting to complete a daily diary of what you actually did for a particular month and compare it to the planned calendar. This may give some indication of the correlation between planned events and actual events.

A copy of the planned monthly calendar should be presented to the school administrator. This serves several purposes. First, the administrator sees that "a job" is being done. Secondly, a more accurate picture of what "the job" entails is presented. Finally, keeping the administration informed serves as a good in-school public relations tool. Accounting for your time, particularly outside of the school facilities, is a primary responsibility of the teacher of the adult FBMA program.

It is also important to plan and schedule individual meetings. Dates and times for the visit should be mutually agreed upon by both the instructor and the enrollee. It is suggested that the instructor plan visits during regular work hours as often as possible, thus limiting late evening visitation. An example visitation form is included on page 24, along with a blank visitation form on page 25. The topic should be filled in prior to arrival on site. Space is provided for listing problems discussed, recommendations made, information needed and tentative topic for the next visitation. The back of the form could be used for additional notes. The completed form should be filed with other records concerning the individual enrollee.

Example of a Half-Time

Home Phone 679-2100
Office 679-2200

ADULT TEACHER MONTHLY SCHEDULE

Instructor M. O. Voag Month November 1992

SUN.	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SAT.
1	2 H.S. Classes	3 H.S. Classes	4 H.S. Classes	5 State	6 State	7
	Robert Retter FFA Mtg 7:30	Bob Dimitt FBMA I - 7:30	1:00 office 3:00 SAE visits (2)	Teachers Mtgs.	Teachers Mtgs.	
8	9 H.S. Classes	10 H.S. Classes	11 H.S. Classes	12 H.S. Classes	13 H.S. Classes	14
	Duane Smith	Ronnie Haas	Adult Tchrs Mt 1-5:00	1:00 office YF/Adult Class 7:30	1:00 office 3:00 SAE visits (2)	
15	16 H.S. Classes	17 H.S. Classes	18 H.S. Classes	19 H.S. Classes	20 H.S. Classes	21
	Bob Smith	Don Edwards	SAE visits (4)	1:00 office YF/Adult Class 7:30	1:00 office Faculty Mtg 4:00	
22	23 H.S. Classes	24 H.S. Classes	25 H.S. Classes	26 Thanksgiving	27 Thanksgiving	28
	1:00 office 3:00 SAE visits (2)	Steve Hopper 4-6:00 Area Ag Teachers	1:00 office 3:00 SAE visits (2)	Vacation	Vacation	
29	30 H.S. Classes					
	1:00 office 3:00 SAE visits (2)					

FARM BUSINESS MANAGEMENT AND ANALYSIS PROGRAM
INDIVIDUAL VISITATION FORM

Name_____ Date_____

I. Topics for Today's Visitation:

1. *Records--cash flow and updated.*
2. *Markets--beans, calves.*

II. Topics and Problems Discussed:

1. *February--cash flow for bank.*
2. *December--cash flow for business.*
3. *Custom Rates--disc-field cutter and spray--planted, cultivated acre.*
4. *Jean will have cash flow sheet drawn up for next visit.*
5. *Enterprise analysis sheets started.*

III. Recommendations Made by Instructor:

1. *IBR calves.*
2. *Take soil tests.*
3. *Enter bank payment as a receipt and an expense.*

IV. Information Needed:

V. Tentative Topic for Next Visitation:

Date:_____ Time:_____

VI. Upcoming Meetings and Class Topics:

FARM BUSINESS MANAGEMENT ANALYSIS PROGRAM
INDIVIDUAL VISITATION FORM

Name_____ Date_____

I. Topics for Today's Visitation:

II. Topics and Problems Discussed:

III. Recommendations Made by Instructor:

IV. Information Needed:

V. Tentative Topic for Next Visitation:

Date:_____ Time:_____

VI. Upcoming Meetings and Class Topics:

Facilities

An office should be provided that will coordinate with the total vocational agriculture program and allow easy accessibility for enrollees. Privacy for teacher-enrollee conferences should be maintained.

The following list of equipment is also suggested for this program:

1. Teacher's desk.
2. Work table and chairs.
3. Two four-drawer filing cabinets with locks.
4. Electronic calculator with tape.
5. Private telephone.
6. IBM or compatible (286K minimum) with 3.0 MSDOS or better.
7. Instructional materials for teacher and enrollees.

Maintaining Files

The FBMA instructor will want to be accountable. Adequate files will help in this regard. Two categories of files, student and instructor, should be maintained.

A separate file on each individual enrollee will be beneficial. Information to maintain should include:

1. Completed enrollment forms.
2. Visitation records.
3. Mutual Understanding form.
4. Farm Record Data.
5. Other information.

The instructor will also want to maintain an accurate file concerning various aspects of the FBMA program. Suggested files include:

1. Monthly schedules (both planned and actual).
2. Travel records.

3. FBMA lessons and units.

4. Evaluation forms.

5. Prospective member list.

6. Other information.

Public Relations and Member Communications

Good public relations within the community is an essential component of FBMA adult instruction, as it is with other aspects of vocational agriculture programs. The following is a partial list of groups that must be worked with successfully:

1. Former adult students.

2. Prospective adult students.

3. Agricultural organizations.

4. Cooperatives.

5. Agricultural agencies.

6. Agricultural businesses.

7. Educational organizations.

8. Local school administrators.

9. Community leaders.

10. Others contributing to the promotion and progress of the local vocational agriculture program.

Informing the public can be accomplished in a number of ways. Newspaper articles are probably most common. Numerous publications explaining the procedures for writing such an article are available. Other ways of informing the public include: (1) radio talk shows, (2) presentations for civic organizations and the like, (3) posters, (4) letters, (5) open houses of school facilities, (6) farm tours, (7) community demonstrations and (8) exhibits.

A monthly newsletter can be developed specifically for FBMA enrollees or for the total adult/young farmer group. Some teachers may prefer to include FBMA information in a more widely distributed newsletter. It can serve as a tool for informing the enrollees concerning class sessions and related activities. A sample monthly newsletter appears on the next page.

SAMPLE MONTHLY NEWSLETTER

July 23, 1990

TO: Mytown Young Farmers and Young Farm Wives

From: M. O. Voag--Young Farmer Advisor

YOUNG FARMERS STATE TOUR: I would like to remind everyone that the state tour is August 5, 6, and 7 in the Greenfield-Lockwood area of southwest Missouri. Headquarters for the tour is at Greenfield High School football field at Greenfield.

As you have probably already read in the state newsletter the tour will be showing a lot of diversity of southwestern Missouri with a good barbecue on Monday evening and super entertainment by Jim Craig, "The Good Humor Man."

At this time I'm planning to leave Sunday evening and stay for the duration of activities on Monday and return late Monday evening. Please contact me as soon as possible if you haven't already sent in your registration fees. We should let the Greenfield-Lockwood Young Farmers know about how many will be attending the tour. Registration for the tour is $20.00, which covers the meals and drinks while on the tour. A motel listing with prices is provided with the enrollment form.

I'M ON THE JOB: Believe it or not I'm working this summer and am available if anyone needs my assistance. Note the enclosed calendar which indicates the days you would most likely be able to contact me. Remember that any work that requires manual labor I'm allergic to!

ADULT EDUCATION CLASSES FOR WINTER OF 1990-91: Planning needs to start now for effective adult education classes to occur this next winter. The Young Farmer officers need your input in order to determine what will be offered. Please check the enclosed form and return it to me immediately so that classes that you want will be held this next winter.

REMINDER: The next Young Farmer meeting will be held Wednesday, August 15.

Evaluating FBMA

An essential component of any program is evaluation. This step serves as an indicator of a program's progress. Information collected can be used to identify strengths and weaknesses. If changes are implemented to alter weak areas, the program continuously improves.

Several examples of evaluation forms presently being used in different schools have been included on the following pages.

1. The first (set of three) is intended to serve primarily as a program evaluation. The results will help identify those lessons that contain information that the class enrollees actually use in the farm business. An individual form has been designed for each of the three units in FBMA.

2. The next form is intended as an instructional evaluation. The class members are asked to respond more to how the class was managed than to what was included. It is a teacher evaluation.

3. The third form, unlike the others, contains open-ended questions relating to a general evaluation of FBMA.

The FBMA instructor is encouraged to implement some type of evaluation that can be done on a regular basis (quarterly, annually, etc.). The forms presented herein are intended as possible examples. The instructor may choose to use only one of the forms, all of the forms, or any combination. The instructor may also want to develop his/her own evaluation instrument.

One caution should be kept in mind. In many cases adults have not had previous experience with evaluation forms. A precise explanation of the procedures they are to use in completing the forms is necessary.

Miscellaneous Suggestions

1. A portion of each monthly meeting should be devoted to the discussion of specific accounting problems confronting enrollees.

2. The instructional meetings should start no later than October to assure ample time in preparation necessary to complete the beginning inventory in January.

3. Adequate time should be spent in preparation for each instructional session.

4. Definite objectives should be identified for each instructional session.

Evaluation

FARM BUSINESS MANAGEMENT ANALYSIS PROGRAM
Unit I--Establishing a Farm Accounting System

Lesson	I use the information provided in this lesson . . .			
	Very Often	Often	Seldom	Never
1. Orientation to the Farm Business Management Analysis Program				
2. Introduction to Keeping Records				
3. Recording Receipts and Expenditures				
4. Planning the Year's Cash Flow				
5. Developing an Inventory of Machinery				
6. Developing Inventories of Livestock and of Crops and Supplies				
7. Developing an Investment Record for Real Estate				
8. Keeping Enterprise Records				
9. Completing Farm Support Records				
10. Using the Concept of Time Value in Planning				
	Very Often	Often	Seldom	Never
THE INSTRUCTOR WAS:				
1. Prepared for class.				
2. Enthusiastic.				
3. Competent in technical skills.				
4. Able to communicate effectively.				
	Very Often	Often	Seldom	Never
INDIVIDUAL INSTRUCTION:				
1. Benefited my business.				
2. Was well-timed and scheduled.				
3. Met my needs.				

Evaluation

FARM BUSINESS MANAGEMENT ANALYSIS PROGRAM
Unit II--Analyzing the Farm Business

Lesson	I use the information provided in this lesson . . .			
	Very Often	Often	Seldom	Never
1. Minimizing This Year's Taxable Income				
2. Summarizing the Year's Records				
3. Methods of Tax Management				
4. Planning Next Year's Livestock and Cropping Programs and Cash Flow				
5. Analyzing the Profit/Loss Statement				
6. Analyzing the Financial Statement and Cash Flow				
7. Analyzing Livestock Enterprises				
8. Analyzing Crop Enterprises				
9. Analyzing Machinery, Equipment, and Building Costs				
10. Utilizing Farm Credit				
	Very Often	Often	Seldom	Never
THE INSTRUCTOR WAS:				
1. Prepared for class.				
2. Enthusiastic.				
3. Competent in technical skills.				
4. Able to communicate effectively.				
	Very Often	Often	Seldom	Never
INDIVIDUAL INSTRUCTION:				
1. Benefited my business.				
2. Was well-timed and scheduled.				
3. Met my needs.				

Evaluation

FARM BUSINESS MANAGEMENT ANALYSIS PROGRAM
Unit III--Adjusting the Farm Business to Increase Profit

Lesson	I use the information provided in this lesson . . .			
	Very Often	Often	Seldom	Never
1. Determining the Most Profitable Cropping System				
2. Planning Income Tax Management				
3. Closing the Record Book				
4. Planning This Year's Cash Flow				
5. Analyzing the Farm Business				
6. Lowering Operating Costs				
7. Reducing Overhead Costs				
8. Determining the Most Profitable Livestock System				
9. Adjusting Capital Investments to Increase Net Profit				
10. Increasing Labor Efficiency				
	Very Often	Often	Seldom	Never
THE INSTRUCTOR WAS:				
1. Prepared for class.				
2. Enthusiastic.				
3. Competent in technical skills.				
4. Able to communicate effectively.				
	Very Often	Often	Seldom	Never
INDIVIDUAL INSTRUCTION:				
1. Benefited my business.				
2. Was well-timed and scheduled.				
3. Met my needs.				

Evaluation

FARM BUSINESS MANAGEMENT ANALYSIS PROGRAM

A. THE INSTRUCTOR. . .

		VERY OFTEN	OFTEN	SELDOM	NEVER
1.	has a positive attitude.	____	____	____	____
2.	is willing to be of help.	____	____	____	____
3.	is too slow in getting information for members.	____	____	____	____
4.	provides good, pertinent advice.	____	____	____	____
5.	does not follow through to problem solving.	____	____	____	____
6.	avoids answering questions.	____	____	____	____
7.	works well with the class as a group.	____	____	____	____
8.	works well with individuals.	____	____	____	____
9.	spends too much time with a few, select members.	____	____	____	____
10.	effectively manages class discussions.	____	____	____	____
11.	schedules visits to match my available time.	____	____	____	____
12.	helps me improve my record keeping.	____	____	____	____
13.	is enthusiastic.	____	____	____	____
14.	is well-organized for visits.	____	____	____	____
15.	is well-organized for classes.	____	____	____	____
16.	is competent.	____	____	____	____

B. Check the area(s) in which the instructor needs improvement:

__1. Financial management
__2. Records
__3. Marketing
__4. Production
__5. Other_____
(please specify)

C. At this point, I would give the instructor an overall performance of (check one):

__Does not meet requirements
__Needs job improvement
__Meets job requirements
__Exceeds job requirements
__Far exceeds job requirements

Adapted from Chillicothe Evaluation Forms.

General Evaluation

FARM BUSINESS MANAGEMENT ANALYSIS PROGRAM

1. **Do you believe you and the group have benefited enough from the information presented in the classes that they should be continued?**

2. **Do you favor continuation of the classes if they are handled in the same manner as they were this year?**

3. **Based on this past year, would you recommend this class to someone else?**

4. **At this point, do you think you will sign up for another year?**

5. **What improvements would you suggest?**

**Adapted from Chillicothe Evaluation Forms.*